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JANUARY 1951

# CHRONICLE OF THE WORLD HEALTH ORGANIZATION

EVOLUTION AND FUTURE ROLE OF WHO  
SYMPOSIA ON SYPHILIS  
SCHOOL HEALTH SERVICES  
RABIES CONTROL IN ISRAEL  
MASS BCG VACCINATION IN CZECHOSLOVAKIA  
HUMAN RICKETTSIOSES IN AFRICA  
PSYCHIATRIC ASPECTS OF JUVENILE DELINQUENCY

WORLD HEALTH ORGANIZATION  
PALAIS DES NATIONS  
GENEVA





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The World Health Organization (WHO) is a specialized agency of the United Nations and represents the culmination of efforts to establish a single inter governmental health agency. As such it inherits the functions of antecedent organizations such as the Office International d'Hygiène Publique, the Health Organization of the League of Nations and the Health Division of UNRRA.

WHO had its origin in the proposal made at the United Nations Conference held in San Francisco in 1945 that a specialized agency be created to deal with all matters relating to health. In 1946 representatives of 61 governments met at the International Health Conference. New York drafted and signed the WHO Constitution and established an Interim Commission to serve until the Constitution could be ratified by 26 Member States of the United Nations. The Constitution came into force on 7 April 1948, the first World Health Assembly met in Geneva in June 1948 and on 1 September 1948 the permanent Organization was established.

The work of the Organization is carried out by three organs: the World Health Assembly, the supreme authority to which all Member States send delegates; the Executive Board, the executive organ of the Health Assembly consisting of 18 persons designated by as many Member States; and a Secretariat under the Director General.

The scope of WHO's interests and activities exceeds that of any previous international health organization and includes in addition to major projects relating to malaria, tuberculosis, venereal diseases, maternal and child health, nutrition and environmental sanitation, special programmes on public health administration, epidemic diseases, mental health, professional and technical training and other public health subjects. It is also continuing work begun by earlier organizations on biological standardization, unification of pharmacopoeias, addiction-producing drugs, health statistics, international sanitary regulations and the collection and dissemination of technical information including epidemiological statistics.

\* \* \*

The *Chronicle of the World Health Organization* is published monthly in English, French, Spanish, Chinese and Russian editions. It contains general information on the Organization, its principal activities, the meetings of its expert committees and other advisory bodies, as well as summaries of its main technical publications. Material from the *Chronicle* may be reproduced in the professional press providing due acknowledgement is made.

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## RECENT AND FORTHCOMING MEETINGS

### 1950

- 4 11 October WHO Expert Committee on Insecticides second session Geneva
- 9 18 October WHO Expert Committee on International Epidemiology and Quarantine third session Geneva
- 30 October WHO Expert Committee on the Unification of Pharmacopoeias seventh session Geneva
- 4 November
- 2 9 November WHO Expert Committee on International Epidemiology and Quarantine Legal Subcommittee third session Geneva
- 6 7 November WHO Expert Committee on the Unification of Pharmacopoeias Subcommittee on Non Proprietary Names first session Geneva
- 6-11 November WHO Expert Committee on Biological Standardization fourth session Geneva
- 6 13 November FAO/WHO Expert Panel on Brucellosis first session Washington
- 27 November Commission for Technical Co operation in Africa WHO Malaria Conference in Equatorial Africa Kampala Uganda
- 9 December
- 11 12 December Preparatory Working Group on a Public Health Administration Seminar Geneva
- 11 16 December WHO Expert Committee on Malaria fourth session Kampala Uganda
- 11 16 December WHO Expert Committee on Mental Health Subcommittee on Alcoholism first session Geneva
- 11 16 December Joint WHO/FAO Expert Group on Zoonoses first session Geneva

### 1951

- 8 January WHO Executive Board Standing Committee on Administration and Finance Geneva
- 22 January WHO Executive Board seventh session Geneva
- January Léon Bernard Foundation Committee Geneva
- March WHO Expert Committee on Environmental Sanitation second session Geneva
- April WHO Expert Committee on International Epidemiology and Quarantine fourth session Geneva
- April WHO Expert Committee on International Epidemiology and Quarantine Legal Subcommittee fourth session Geneva
- April Joint FAO/WHO Expert Committee on Nutrition second session Rome
- 9 April WHO Special Committee to consider the Draft International Sanitary Regulations prepared by the Expert Committee on International Epidemiology and Quarantine Geneva
- 16-25 April WHO Expert Committee on the Unification of Pharmacopoeias eighth session Geneva
- May Léon Bernard Foundation Committee Geneva
- May WHO Expert Committee on Venereal Infections and Treponematoses Subcommittee on Serology and Laboratory Aspects third session Paris
- 7 May Fourth World Health Assembly Geneva

# EVOLUTION AND FUTURE ROLE OF WHO

BROCK CHISHOLM M D

*Transcript (abridged) of an introductory statement by the Director General to the Standing Committee on Administration and Finance of the Executive Board 12 January 1951*

It is recognized widely that the work of this Organization is increasing very greatly. Its complications are far greater than in any previous time and bid fair to become even more complicated in the future.

It may be useful to take a very quick look at the situation, the changed context in which the World Health Organization is now functioning. I will not refer to political situations which you all know as well as anyone does but which have certain disrupting and complicating effects on the work of the Organization. But aside from that there is a most significant change in the environment, the total situation within which the World Health Organization works. Three years ago the World Health Organization in its Interim Commission and then in its Assembly, its Executive Board and in the Secretariat here had to determine the policies of the Organization almost entirely from this Headquarters and in a much less complicated context. In that environment it was decided that the Organization would specialize, concentrating its work in certain special fields of action which should be given priority. Certain priorities which you all know were then determined. This year with continuing decentralization and within the framework of the general programme of work approved by the Assembly, the regional organs and the countries within the regions have drawn up their own programmes. In some cases the regional committee has approved these programmes and budgets in detail. In other cases the countries concerned have given approval to particular parts of the programme and budget but have not taken definitive official action approving them. This is the first major step in decentralization in the field of programme planning.

The next step to be accomplished I hope during the next two or three years will be when the details of large parts of the programme will be made up actually in the countries concerned with the assistance of the staffs of the regional offices and approved by the regional committees. Then decentralization in this aspect of the work of the Organization will have been completed. However there are implications to this fact. The major implication is that it is no longer possible either for the Assembly or the Executive Board to lay down from the Headquarters the details of the



regional parts of the programme, because it is being developed according to the actual needs in individual countries. It will still be within the possibilities of the Assembly, on the advice of the Executive Board or on its own initiative, to veto any particular types of programme projects or any particular lines of development of programmes. But now it is hardly possible for the Assembly to decide what should be done by the Organization within countries where the countries themselves have, with the assistance of regional staffs and temporary consultants and the advice of experts which comes from many directions, decided what they need.

An attempt has been made in the programme to help each country to take the next appropriate step in its own development of its health services and its government's ability to provide its people with an opportunity to live in healthy ways. This is a new and sound development which changes to a considerable extent the whole atmosphere in which the World Health Organization works. It is an inevitable result of the reality of efficient and genuine decentralization.

Still another set of developments is very significant—the development of the programmes of technical assistance for economic development. This new source of funds for international health work is not fully developed at the present time but provides at this moment some one and a half million dollars actually available in money to the World Health Organization. This amount will increase during 1951 to a total of perhaps over four million dollars—it may even be considerably more than that. This money is earmarked for special purposes for programmes of technical assistance for economic development and this inevitably influences the direction of the development of this Organization. The other aspect of this is the development of bilateral technical assistance for economic development. A large source of this type of funds is the United States Government which is providing very considerable amounts for bilateral technical assistance. Then also there are the Commonwealth funds for bilateral technical assistance for economic development and certain individual countries give technical assistance to other countries. All this represents the provision of many millions of dollars for technical assistance for economic development, a very large proportion of which funds are going into the health field.

There is another important way in which the atmosphere has changed. Early in the history of this Organization when the World Health Organization was alone in the field of provision of international health services other organizations, UNRRA at the beginning and later UNICEF, in particular, were in this field in terms of supply but supply only. Now that situation has changed very greatly. UNICEF has developed overwhelmingly into a new international health organization. It is not any longer simply in the field of supply but is financing supplies, fellowships and other services for large health developments. Inevitably this lays heavy responsibilities and requirements on the World Health Organization. We must

face the fact that in terms of field work WHO during 1950 has done more work for UNICEF programmes than for WHO programmes. The budget of UNICEF is very large as compared with that of WHO. The requirements of UNICEF and its demands on WHO to provide technical advice and technical controls to examine programmes and supply technical individuals to see that those programmes are implemented in technically sound ways have become very heavy indeed.

The pennyworth which the World Health Organization was able to provide is swamped and lost in this tremendous influx of vast amounts of money. Inevitably in an atmosphere so changed the World Health Organization must consider its orientation. The fact is that these developments are making enormous demands on the World Health Organization. They are not relieving those demands or making them less; they are making them very much greater. All of these organizations providing very large amounts of money are greatly concerned that there should be adequate and real co-ordination throughout the whole of all these programmes. It should be most clearly understood that the terms of reference of these various organizations vary widely. Therefore the motives behind these programmes and the criteria by which they are judged vary greatly among the different organizations working in the health field. For example the organizations responsible for disbursing these funds are sometimes under considerable pressure to expend them rather quickly perhaps within a given fiscal period. They may also be under pressure to expend them on programmes which may be calculated to produce quick spectacular or easily demonstrable results. This also is inevitable and not to be quarrelled with since at least at the inception of such programmes these considerations will always be of quite considerable importance.

It appears now that the basic concern of the World Health Organization in this new context should be with the orderly development of the health services of governments so that they may stand the impact of these very large funds which are being thrown into their countries and into their health programmes. These very large funds could be very disrupting to the development of health services particularly in underdeveloped countries. If there is no proper proportion kept among the various developments within countries then there is every likelihood that many health services would not be helped effectively but would actually be disrupted to a considerable extent by developing different aspects of their health services entirely out of proportion to the relative needs. These facts make the whole problem of training of technical personnel and the development of the ability of governmental services efficiently to absorb money very much more important and greatly increase the importance of the advice and the services of the World Health Organization along these lines. The World Health Organization so far is almost alone in the degree of its concern for these particular aspects of development.

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An attempt has been made in the programme to help each country to take the next appropriate step in its own development of its health services and its government's ability to provide its people with an opportunity to live in healthy ways. This is a new and sound development which changes to a considerable extent the whole atmosphere in which the World Health Organization works. It is an inevitable result of the reality of efficient and genuine decentralization.

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There is a further equally important factor in our new context. It is not actually a new factor but is one which has lately developed rapidly. This is the concern of United Nations, particularly of its Economic and Social Council, with the co-ordination of the work of United Nations and the specialized agencies, including all the projects for assistance of under-developed countries. The Economic and Social Council has passed a resolution which states its attitude in this manner in terms of concentration of effort and resources by all the agencies of the UN family. It has laid down a set of criteria in relation to projects of the United Nations and the specialized agencies which it and the General Assembly have asked the specialized agencies and United Nations to take into consideration when they are going through their processes of programme making. These criteria in no way conflict with those set up by the three World Health Assemblies and, indeed, WHO was something of a pioneer along these lines. It is quite apparent that it is highly desirable that some generally comparable criteria should be used by all the agencies working in these fields.

May I say that the international and the large agencies of bilateral technical assistance are being extremely co-operative in this whole matter. They are doing everything possible to see that their efforts do not cut across the efforts of the international agencies and a close system of liaison has been worked out and is being constantly improved to make quite sure that technical assistance for economic development does not become competitive among various agencies, particularly among international and bilateral agencies. A great danger of this whole development is the temptation to nations to shop around to get the best possible terms and as large amounts of assistance is possible from different agencies. Various methods have been developed for dealing with this possibility. In the first place the Technical Assistance Board of the United Nations and the specialized agencies receives immediately, and now in the case of the World Health Organization directly from regional offices, copies of all requests from governments for services whether under the regular programme or the technical assistance programme. WHO has just arranged for these notifications to go direct to the Technical Assistance Board from the regional headquarters without having first to come through this Headquarters. The Technical Assistance Board then notifies the other specialized agencies and United Nations of the request. The bilateral technical assistance authorities are also notified of all these requests. We make available to the Government of the USA, through offices here in Geneva, copies of requests for services as soon as they are received, so that its bilateral technical assistance authorities will know when anything is begun to be considered by the World Health Organization may recognize the field in which the international organization is working and may themselves avoid that particular field. We are working out similar arrangements with other

governments These authorities are being meticulously careful to respect the fields in which the international organizations are working and I think already one may say that this system is working well and that the co ordination is developing out of a really workable and effective system

So much for the context and the inter agency machinery which is being developed to ensure co ordination The implications however for the World Health Organization have great importance In effect WHO is now dealing with the technical aspects of health programmes amounting to many millions of dollars actually in the region of hundreds of millions of dollars and the complications and increase in work have been very great Every attempt has been made and is being made to keep down the staff particularly the staff at this Headquarters and I hope this committee and the Executive Board will be pleased with the success of that attempt Only very few positions have been added to this Headquarters to help the Organization to cope with the vastly increased volume of work On the other hand there is a considerable increase in the staffs of the regional offices This increase is inevitable it will have to continue and even be accelerated If the programmes go on as they are now the necessity for additional staff in regional offices will be quite considerable Already this situation is recognized and the demands that are being made on the regional staffs are at this time going far beyond their capacity to cope with the amount of work involved Inevitably many of the programmes under technical assistance involve co ordination of the work of several specialized agencies and United Nations and one or more agencies of bilateral technical assistance This work has to be done in the countries concerned there is no possibility of doing it anywhere else The Technical Assistance Board can co ordinate policies and general methodology and can lay down suitable techniques for administration and execution of the programme but the co ordination in each country will in the end have to be carried out in that country in co operation with the government concerned Already in some countries technical assistance committees have been set up Represented on these committees are the various departments of the government concerned and representatives of one or more of the following the UN one or more specialized agencies bilateral technical assistance from the USA bilateral technical assistance of the British family of nations UNICEF Sometimes there have been appointed resident technical assistance representatives working on behalf of all the participating agencies in the UN programme of Technical Assistance for Economic Development Various other people perhaps local representatives of ECA funds which are sometimes different from those of the USA bilateral technical assistance programmes may also be involved One country has actually reached the point where it has stated that the government is not capable of accepting any new developments in technical assistance that their resources and ability to absorb technical assistance are now fully committed with what is already

There is a further, equally important, factor in our new context. It is not actually a new factor but is one which has lately developed rapidly. This is the concern of United Nations, particularly of its Economic and Social Council, with the co-ordination of the work of United Nations and the specialized agencies, including all the projects for assistance of under-developed countries. The Economic and Social Council has passed a resolution which states its attitude in this manner in terms of concentration of effort and resources by all the agencies of the UN family. It has laid down a set of criteria in relation to projects of the United Nations and the specialized agencies which it and the General Assembly have asked the specialized agencies and United Nations to take into consideration when they are going through their processes of programme making. These criteria in no way conflict with those set up by the three World Health Assemblies and indeed WHO was something of a pioneer along these lines. It is quite apparent that it is highly desirable that some generally comparable criteria should be used by all the agencies working in these fields.

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## SYMPOSIA ON SYPHILIS

Syphilologists from Europe and the USA met in Helsinki from 4 to 10 September 1950 and in Paris from 25 September to 7 October 1950 to attend symposia on syphilis which were sponsored by the Finnish and French health administrations with the co operation of WHO. Major topics of discussion were early syphilis, prenatal and infantile syphilis, neurosyphilis and serology in syphilis. The papers presented at the symposia and the round table discussions which followed them will be published in *Acta Dermato Venereologica Scandinavica* in English and in *Prophylaxie antivenérienne* in French.

### Early Syphilis

Professor C. R. Rein of New York University in a paper "Problems in the therapy of early syphilis" emphasized the advantages of penicillin therapy and described five inadequacies which might explain why many previous evaluations of this type of treatment were not favourable: inadequate (1) dosage, (2) duration of therapy, (3) knowledge of the chemistry of penicillin, (4) interpretation of serological response and (5) clinical evaluation.

Most important in the improvement of the efficacy of penicillin therapy has been the development of absorption delaying preparations which have made possible the maintenance of adequate serum concentration of the antibiotic for a sufficient length of time, e.g. above 0.03 units per ml for a period of 72 to 96 hours (Mahoney). Good results have been obtained in the USA with procaine penicillin (small particle size) in peanut oil jelled with 2% aluminium monostearate.

The accumulated experience of numerous investigators has indicated that early infectious syphilis can be cured or rendered non-infectious by penicillin alone and that the adjuvant use of heavy metals or fever therapy does not appreciably increase the cure and improvement rate of the disease. Penicillin has also been shown to be effective in retreatment of patients in whom penicillin or other treatment has failed. Toxic and allergic reactions to the antibiotic are not considered frequent or serious enough to jeopardize its use in syphilis therapy.

Professor Rein suggested the following treatment schedule for all patients with early infectious syphilis: on the first day administer one injection of 4 ml of procaine penicillin in oil and aluminium monostearate (1.2 million international units); then if possible arrange to give the patient one injection of 1 ml once a day for six additional days or 2 ml twice a week for three weeks. The advantage of this schedule is that an adequate dosage of penicillin is administered on the first day of treatment.



planned. Many other countries would like to require very large amounts of materials and supplies but do not have available within their countries the technical resources which would enable them to use these supplies adequately for the good of the people.

I hope I have not too much complicated this picture but this is the situation. This is the new atmosphere in which this and the other international organizations are working. Inevitably this becomes the time for re-evaluation and reconsideration of the development of the Organization and its methods of working. It is no longer as simple as it was in previous years. The process of decentralization by the World Health Organization is going on very quickly. These developments have stimulated that process extensively and at this time much decentralization has taken place beyond that of last summer. I have quoted particularly the field of programme-planning and programme development in which it has taken place as it has in many other fields.

In order to cope with this vastly greater complication of the work of the Organization we have within this Headquarters made certain other adjustments. For instance we arranged for all the directors here, including whenever they are available the directors of regional offices to consider all aspects of the work of the Organization. Among the directors of this Organization is to be found a wealth of training and experience which is perhaps unique. In bringing all the directors together rather frequently to consider generally and sometimes in detail the work of the Organization we are finding that we are much more able to develop quickly, as is now necessary, sound policies in relation to an enormous variety of new developments with which the Organization must concern itself. We have also set up a smaller group including the Director General, the Deputy Director General and the Assistant Directors General which functions entirely on a policy basis and meets from time to time to consider, in terms of top policy, the recommendations of the directors, the recommendations from the regions and the directions and suggestions made by the Assembly and the Executive Board. Both bodies also take into account new situations in our relationship with other agencies. These new situations inevitably now occur very frequently and in many cases since there is no precedent the necessary policy is being formed from day to day. The problem of keeping a whole organization abreast of these rapid changes has been a difficult one and occupies an increasing amount of the time of many members of the senior staff of this Organization.

Gentlemen, I apologize for speaking so long. I can only plead in excuse that I feel that it is necessary to point out the existence of this new background — a new situation and environment in which this Organization finds itself — and to suggest to you the very greatly increased complications of our work.

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so that should the patient fail to return for additional therapy the physician has a more than 90% chance of rendering the patient non infectious and curing his infection

Arsenical bismuth therapy was discussed by Dr P Møller of Copenhagen who reported on clinical results and by effects of its use in the treatment of 625 cases of early syphilis. He found that 75% of the patients showed no serious by effects the 25% who experienced by effects serious enough to warrant interruption of the treatment later resumed it. One death resulted. Attendance during the course of treatment was satisfactory in 76% of cases i.e. the patients completed the course with less than one month's delay. There were 19 relapses of which 7 were probably reinfections. Dr Møller pointed out that penicillin treatment has the advantages of being non toxic and of requiring much less time for completion than arsenical bismuth therapy. the latter however is still used in some clinics in Denmark where the incidence of early syphilis is declining rapidly (4 per 10 000 inhabitants in 1948 2.4 in 1949) and the epidemiological significance of penicillin is not as marked as in countries with a high prevalence of the disease.

Professors H Gougerot and R Degos of Paris called attention to the many problems still to be solved in the treatment of early syphilis and warned that until there is an absolute criterion for the cure of syphilis and until it will have been possible to observe patients treated with penicillin for at least 12 years it is advisable to give "the double chance of cure penicillin plus bismuth."

### Prenatal and Infantile Syphilis

In a paper entitled "The value of penicillin alone in the prevention and treatment of congenital syphilis" Professor N R Ingraham jr reported on relevant experience over a seven year period at the University of Pennsylvania and the Philadelphia General Hospital. His analysis revealed that in the type of material studied the probability of a normal full term living infant's resulting from a pregnancy uncomplicated by syphilis was about 86%. Untreated early syphilis in an otherwise similar group of patients resulted in a dead or diseased infant in approximately 82% of cases. the possibility of neonatal death was increased 6 times and of stillbirth at term 32 times over that of the normal control group.

Even a small amount of treatment with either arsenic and bismuth or with penicillin produced a markedly favourable effect on the outcome of pregnancy in the syphilitic patients. Effective dosage of penicillin (e.g. 600 000 units of procaine penicillin G in oil with 2% aluminium mono stearate once daily for ten days or 1.2 million units every other day to a total of 6 million units) given to 663 pregnant women with early syphilis resulted in 92.5% normal full term living infants and only 1.5% living syphilitic

**FIG 1 INTERNATIONAL  
POSIUM ON SYPHILIS PA**



Professor C R Rein of new  
University explaining the Rein-U:  
serodignostic test for syphilis

**FIG 2 INTERNATIONAL SYM  
POSIUM ON SYPHILIS PARIS-II**



Participants at a visit to the laboratory  
of the Department of Biochemistry at  
the Institut Pasteur Paris

**FIG 3 INTERNATIONAL S  
POSIUM ON SYPHILIS PARIS**



M Monacelli In this campaign which was instituted in 1948 with the help of UNICEF and WHO 1241 women received penicillin treatment In nearly all these cases syphilis was latent or undiscovered or insufficiently treated previously not more than 11% showed clinical manifestations of active and recent syphilis The results of the treatment were less encouraging than those which have been obtained in studies of cases of early infection Professor Monacelli therefore cautioned that although penicillin is the drug which best meets the requisites of ideal syphilis therapy for pregnant women final evaluation of its effectiveness especially with regard to latent syphilis must await the findings of many more years observation

### Neurosyphilis

The diagnostic and therapeutic problems in neurosyphilis were discussed by Professor B Dattner of New York University who stressed the importance of laboratory tests of the spinal fluid as the most reliable means of detecting the disease following the pathologic process and evaluating the effects of therapy He named as essential tests accurate cell count total protein determination one of the colloidal reactions (e.g. the Lange colloidal gold test) and the serological procedures (i.e. complement fixation and flocculation tests) Professor Dattner found that the cell count dropped to 3 or less cells per  $\text{mm}^3$  within approximately six months following successful treatment of all types of neurosyphilis and that total protein values showed a more gradual but still relatively prompt decrease Such findings are evidence that the spinal fluid serves as a mirror image of the pathologic processes in the central nervous system

Drs T Putkonen and K Rehtijarvi reported on a study conducted in Finnish hospitals of the febrile Herxheimer reaction in 223 neurosyphilitic patients who were given an initial dose of penicillin of at least 100 000 units Febrile response was recorded in all (21) patients with dementia paralytica who had not had previous malarial or penicillin treatment in 12/ of the patients with asymptomatic neurosyphilis in 16% of those with meningovascular neurosyphilis and in 10 of those with tabes dorsalis Previous chemotherapy with arsenicals and/or bismuth seemed to reduce febrile response to some extent and previous malarial or penicillin treatment to make it impossible Increased abnormality of the cerebrospinal fluid was reflected in an increase in the incidence of febrile responses when the cell count rose over 10 incidence increased eightfold when the Wassermann reaction turned positive it increased threefold Incidence also increased when the protein content became higher and the mastic test became abnormal

Maximal elevation of temperature occurred a few hours later in neurosyphilis than in primary and secondary syphilis usually 12 to 16 hours after injection of penicillin A possible explanation for this delay is that

infants In the period immediately preceding the introduction of penicillin therapy, similar results were obtained in a group of 267 pregnant syphilitic women treated for ten weeks or more with arsenicals with or without bismuth However, penicillin alone has become the drug of choice because of the ease of administration and short duration of the treatment the lack of toxicity, and the ability to cure in utero the already infected foetus

Congenital syphilis case material was limited because of the wide spread application of effective antepartum treatment of the disease but it was possible to observe over varying periods up to five years, 80 babies treated with penicillin alone In surviving infants the clinical and serological response approached perfection when treatment was begun before the fourth month of life in older infants the clinical response was good, but the reversal of the blood serological test to negativity was less satisfactory For the treatment of infantile congenital syphilis Professor Ingraham suggested 100 000 units of penicillin crystalline G sodium per kg of body weight, the total dose in an aqueous solution being divided into 120 individual doses and given every three hours for 15 days

Patients with late congenital syphilis were given up to 9 million or more units of penicillin if possible on an ambulatory basis, the schedule being 600 000 units once daily of procaine penicillin in oil with 2% aluminium monostearate for 15 days or larger doses less frequently The blood serological test in latent or symptomatic late congenital syphilis (103 cases) showed little change during periods of observation up to five years Late gummatous skin and bone syphilis responded promptly to such treatment without recurrence during the period of observation In congenital neurosyphilis (37 cases) return of spinal fluid to normal or near normal following penicillin treatment was almost complete in patients observed up to seven years and relapses were few Interstitial keratitis associated with late congenital syphilis (22 cases) did not respond any better to penicillin than to other previously tried remedies and the final results left much to be desired In such cases penicillin should if possible be supplemented routinely by fever therapy

Dr E Hollstrom gave a preliminary report on a follow up study of the treatment of children for congenital syphilis during the period 1900 to 1950 at the Welander Home in Stockholm This study illustrated the transition in syphilis therapy from mercury preparations to arsenic and bismuth to penicillin and described the complications of each form of treatment or combination of treatments as well as the results obtained Dr Hollstrom felt that penicillin had become the drug of choice and that, thanks to such improved therapy there might come a day—perhaps in one or two years—when institutions such as the Welander Home for congenitally syphilitic children would no longer be needed

A large scale campaign devoted to the case finding of unsuspected syphilis among pregnant women in Naples was described by Professor

and use of cardiolipin antigens Chief among these are obtaining a proper balance of cardiolipin lecithin and cholesterol and securing adequate purification of the two phospholipid components cardiolipin and lecithin She suggested as the most practical means of obtaining pure lecithin employing lecithin from egg yolks as the standard in all cardiolipin antigens She called attention to the necessity of running serological as well as chemical tests on all new lots of cardiolipin and lecithin and recommended that this be done on the basis of a constant antigen formula and not by restandardizing the antigen formula to allow for lack of constancy in the phospholipids

The role of the cardiolipin antigen in the serology of syphilis was also discussed in papers by Professor C R Rein (New York) Professor T Vogelsang (Norway) Mlle M Faure (Institut Pasteur Paris) and Dr H Stock (Zurich) Professor Vogelsang pointed out that it is its specificity rather than sensitivity which has made the cardiolipin antigen such a valuable aid in the serodiagnosis of syphilis Dr Stock called attention to the contributions of Nelson's immobilisation test and Neurath's euglobulin test and suggested that an international serological meeting should determine the most sensitive and specific complement fixation and flocculation tests and establish them as international standards

## SCHOOL HEALTH SERVICES

Recognizing the importance of the health of school age children as a special concern of maternal and child health services the Second World Health Assembly authorized the convening of an expert committee to establish a framework for this part of the WHO programme<sup>1</sup> The Expert Committee on School Health Services met in Geneva from 7 to 12 August 1950<sup>2</sup> to consider the health needs of this particular population group a segment of the lifetime of the whole population and to prepare an outline of the basic policies and approaches to the establishment of improved school health services

The committee first considered the reasons for giving special consideration to the school age group calling attention to the importance of the problems of growth and development and of stress strain and contagion

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The following took part in the session

D C F Bock, Jr, Co. ty M. dir. J. Office of H. lth. Wm. R. dng. f. Y. k. h. r. W. k. G. ld. U. d.  
K. ad. m. (Ch. m.)  
D. E. C. d. C. t. o. S. h. i. Phy. D. p. r. m. nt. f. Sch. i. H. lth. M. p. lty. f. th. Fed. al.  
Dist. t. R. d. J. B. i.  
Pr. f. so. J. H. d. Haas. M. t. m. t. d. Child. H. lth. Sects. P. bl. H. lth. Dep. rtm. t. Th. H. g.  
N. th. l. da. (Vic. Chal. m.)  
Mis. H. L. d. q. at. School. N. rie. S. ockh. lm. Sw. d.

penicillin penetrates into the perivascular foci of spirochetes of early syphilis more rapidly than into the spirochetes present in brain substance

Professors A Brudoun and J Lereboullet of Paris whose subject was Preventive and curative treatment of neurosyphilis, called attention

FIG 4 INTERNATIONAL SYMPOSIUM ON SYPHILIS PARIS IV



Dr Mary Pangborn discoverer of cardiolipin illustrating steps in the preparation of cardiolipin and lecithin

to variations in therapeutic results as evaluated by clinical and by biological criteria and warned against placing too much emphasis on the finding of slight abnormalities in spinal fluid particularly until there is agreement concerning a standard method for the examination of the fluid In reviewing evaluations of different types of treatment of general paresis for example they found that various investigators recorded clinical improvement following classical combined malariotherapy and chemotherapy in from 21% to 60% of cases, biological improvement, on the other hand, was recorded in 70% to 100% of cases Similar variations were found in evaluations of penicillin therapy clinical improvement being recorded in 46% to 80% of cases and biological improvement judged

on the basis of statistics from other studies exceeding 88%

These authors felt that treatment of general paresis should vary according to circumstances combined malariotherapy and penicillin should be given in cases in which there is some urgency concerning hospitalization and penicillin alone followed by malariotherapy when results with the antibiotic are unsatisfactory should be given in cases in which the development of the disease is relatively slow and there is no hurry in the matter of hospitalization The suggested dose of penicillin was 10 to 15 million units Alternating series of penicillin and chemotherapy (bismuth or bismuth plus arsenic) were recommended for the treatment of evolutive tabes and of stabilized tabes provided with regard to the latter that there is no continuous multiplication of the series in case of failure Penicillin therapy was also advised for patients with syphilitic optic atrophy

### Scrology in Syphilis

Dr Mary Pangborn of the New York State Department of Health who isolated cardiolipin described some of the problems in the preparation

services with other community organizations or administrations, it called attention to problems on which further study would be desirable

In concluding its task the committee hoped that the ideas and suggestions developed in the course of its discussions would find practical application for the improvement of the health of school age children in all areas

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## RABIES CONTROL IN ISRAEL

A rabies-control programme in Israel sponsored by WHO and outlined by the Expert Committee on Rabies at its first session<sup>1</sup> was put into operation in October 1950. Vaccination and registration of dogs has been undertaken in all parts of the country. It was estimated that these operations would be completed by the end of 1950.

The population in each area is advised by press, radio and cinema that all dogs must be presented for registration and vaccination. Avianized virus from the USA is stored in refrigerators at Tel Aviv and distributed in thermos flasks to the veterinary officers responsible for the vaccination. Immunization was commenced in the region where rabies is most prevalent between Haifa, Tel Aviv and the Jordanian frontier. Immunized dogs are tattooed on the ear if they have no collar to which a metal disc can be affixed.

In view of the fact that avianized vaccine gives immunity for a year or a year and a half, no revaccination will be carried out before the end of that period.

Stray dogs are being systematically eliminated either by shooting or gassing, since the beginning of the campaign their numbers have considerably decreased. Three quarantine stations have been constructed, each with 20 to 30 kennels. Dogs suspected of being infected with rabies or bitten dogs are kept there for examination. Biting dogs which have been vaccinated are kept under observation for 10 days and released only if they present no symptoms of rabies. The brains of all suspected dogs are subjected to various examinations at a central laboratory in Tel Aviv established for this purpose. Impression smears are made and then treated with Seller's stain, histopathological sections are examined and mouse inoculation tests are performed.

After dogs, jackals are the most dangerous vectors of rabies. Previous experiments have shown that poisoning by strychnine is the most effective method of eliminating these animals. Dead donkeys sprinkled with strychnine are used as bait. A large scale operation is anticipated for the beginning of 1951 when a sufficient quantity of strychnine will be available.



It pointed out that this particular period of life presented not only special problems but offered unusual opportunities for teaching health principles to children and, through them, to their parents. Emphasis was placed on the function of the school as a community unit valuable in organizing health services.

Discussion of the development of school health services was organized under four headings: planning, health promotion, health appraisal and health restoration. With regard to planning stress was laid on the need for co-operation with parents, community agencies, etc., and for integration with other services wherever possible. The latter is particularly important since supervision of growth and development implies a continuity beginning before school age and continuing thereafter.

Promotion of health of school-age children involves many factors including environmental hygiene, nutrition, school schedule, safety control, health of school personnel, communicable disease control, mental health, directed physical activities and health instruction. The school serves as a 'means' rather than an 'end' in many of the problems concerning environmental hygiene, nutrition, safety control and communicable disease control. In matters directly related to the school programme—schedule, physical education, etc.—the focal point is the individual child and his needs.

Adequate appraisal of the health of the schoolchild calls for continuous rather than sporadic observation and the parts played by the parent and teacher are most important. This type of appraisal should be supplemented by periodic physical examinations performed by a school physician and follow-through by a school nurse. These are optimum requirements, in some areas, most of the burden will fall upon the teacher, who may or may not have the assistance of a nurse.

Restoration of the health of the child entails provision of treatment facilities, family co-operation and special care for the handicapped child. Each of these presents problems for school health services.

The committee also discussed dental health, maintenance of cumulative health records, vocational guidance and the role of the health service therein and personnel requirements. It emphasized the importance of adequate training for school health workers and of integration of the

(continued from p. 15)

Dr. Dorothy B. Nyswander, Professor of Health Education, School of Public Health, University of California, Berkeley, Calif., USA.

Dr. M. E. Wegman, Professor of Pediatrics, Louisiana State University, New Orleans, La., USA.  
(Rapporteur)

#### Observers

Mr. J. Bowers, Fundamental Education Section, UNESCO, Paris.

Dr. I. W. Clements, Chief, Nutrition Section, WHO (representing FAO).

Miss M. Fairchild, Women and Young Workers Division, ILO.

Miss L. M. Mackenzie, Social Activities Division, United Nations, New York.

#### Secretariat

Dr. U. Hjertqvist, Consultant in Maternal and Child Health (Sub-Health), WHO (Secretary).

Dr. L. Verheestraete, Chief, Maternal and Child Health Section, WHO.

The report of the committee will be published in March as *World Health Organization Report Series* 30.

First the campaign is described in brief touching on supplies and costs and extended ITC assistance for continuation of BCG vaccination under national auspices. Next the material and its reliability are discussed in an objective manner. Then the results of statistical tabulation and analysis are given followed by the basic statistics on tuberculin testing and BCG vaccination. An appendix "Collection tabulation and calculation of statistical data" is included to enable the reader to understand better the detailed processes of preparation.

Statistics for the campaign are given under three major headings:

- (1) number of persons tuberculin tested and vaccinated with BCG listed by sex and age for each of the 247 counties for Czech and Slovak provinces and for the entire country
- (2) number of males and females vaccinated listed according to year of birth in the different counties and provinces and in the entire country and
- (3) percentage of tuberculin positive reactors listed according to type of test sex and age in the various geographic subdivisions

In addition charts and maps are presented to show the completeness of tuberculin testing and vaccination in terms of corresponding population groups and estimated number of tuberculin negative persons in the population and tuberculin sensitivity by age for urban and rural districts in Czech and Slovak provinces and for the entire country.

It is probable that this report furnishes the most complete and well documented information available on any immunization programme of such magnitude. The cost of the campaign was approximately \$600 000 shared about equally by the Joint Enterprise<sup>4</sup> and the Czechoslovak Government. Considering the work accomplished this cannot be regarded as an expensive outlay.

The campaign was of a very practical nature little attention being accorded to the possibilities for research but the report on the campaign has been prepared with consideration for the possibility of future attempts to evaluate the effect of BCG vaccination in terms of changes in tuberculosis

FIG 3 BCG VACCINATION  
IN CZECHOSLOVAKIA



Denish nurse examining test reaction

## MASS BCG-VACCINATION IN CZECHOSLOVAKIA, 1948-9

A mass BCG vaccination campaign has been carried out in Europe and elsewhere under the joint auspices of Scandinavian voluntary societies<sup>1</sup> and the United Nations International Children's Emergency Fund (UNICEF). Assistance of a technical nature has been rendered by WHO, the Expert Committee on Tuberculosis serving as an advisory body and the WHO Tuberculosis Research Office, Copenhagen<sup>2</sup> being responsible for supervising statistical work and setting up research projects on problems relating to the campaign. Under the leadership of its technical director, Dr J. Holm, the International Tuberculosis Campaign (ITC) has operated in Austria, Ceylon, Czechoslovakia, Ecuador, Egypt, Finland, Germany, Greece, India, Israel, Italy, Lebanon, Malta, Mexico, North Africa, Pakistan, Poland, Syria and Yugoslavia. By the end of October 1950 some 30 million children and adolescents had been tuberculin tested and almost half as many vaccinated with BCG.

The first of a projected series of reports from the WHO Tuberculosis Research Office on the results of the campaign in individual countries has recently been published by the International Tuberculosis Campaign<sup>3</sup>. This report covers the ITC campaign in Czechoslovakia, which was begun in the summer of 1948 by agreement with the Czechoslovak Ministry of Health. At the height of the campaign, 46 teams—with a personnel of about 260 workers in the field—performed approximately 350,000 tuberculin tests per month; the work was completed within one year. A total of 3,328,810 persons were tested and 2,118,562 vaccinated. Some 90% of the school age group 6-14 years old came to be tested and 86% of the estimated number of non-reactors within that age group in the entire country were vaccinated. In organization, magnitude, speed, and quality of field work, the campaign in Czechoslovakia was a truly remarkable achievement and a highly encouraging example of successful and efficient international co-operation in which the Scandinavian organizations and UNICEF, assisted by WHO, worked hand in hand with national and local Czechoslovakian authorities.

The report on the campaign was prepared by the staff of the WHO Tuberculosis Research Office, Copenhagen, from records of the field teams and preliminary tabulations made at the headquarters of the campaign in Bratislava. A vast amount of material has been condensed into a concise document which, nevertheless, covers all the essential information

<sup>1</sup> Danish Red Cross, Norwegian Relief for Europe, and Swedish Red Cross.  
*Chron. Ho. Id. J. H. O. g.* 1950 4: 331.

<sup>2</sup> Yuan, I-C & Nyboe J. (1950) *Mass BCG vaccination in Czechoslovakia 1948-49 with special reference to statistical methods of tuberculin testing and BCG vaccination*. Copenhagen.

FIG 6. DISTRIBUTION OF RICKETTSIAL DISEASES IN AFRICA

morbidity and mortality. The report not only permits detailed comparisons among areas within the country but also provides a basis for comparisons among different countries and peoples. In future international studies on tuberculosis this document will be an indispensable guide.

## HUMAN RICKETTSIOSES IN AFRICA

The position with regard to knowledge of the human rickettsioses in Africa was recently clarified by the Joint OIHP/WHO Study Group on African Rickettsioses<sup>1</sup>. During their meeting the experts presented the results of their personal investigations, as well as unpublished data which throw a new light on this question. This documentation, supplemented by information drawn from official statistics and from medical literature has served as a basis for a study of the geographical distribution of the different rickettsioses in Africa, by Dr M. J. Freyche, Chief, Epidemiological Information Section, WHO, and Mr Z. Deutsehman, Chief, Technological Section, WHO, which has just appeared in the *Epidemiological and Vital Statistics Report*.

There are only four established and one probable rickettsial diseases of man, with two known variant strains in two of these diseases making in all only seven organisms (disregarding for the moment the newly isolated cause of rickettsialpox). This statement by Pinkerton,<sup>2</sup> made in 1948 and quoted by the two authors mentioned above is a striking illustration of the advances made during the last few years towards the clarification and simplification of ideas on the epidemiology of the rickettsioses. Nevertheless there are still many difficulties as regards these diseases: their diagnosis, which must be supported by serological tests carried out in specially equipped laboratories is still a difficult procedure; notification of cases is irregular; statistics are frequently incorrect or inadequate.

On the basis of the simplified classification of the rickettsiosis group, the authors studied in succession: exanthematic typhus (historical typhus), murine typhus, tick typhus (the vectors of which are *Ixodidae* and possibly *Argasidae*), Q fever, trench fever and mite borne typhus (carried by *Trombididae*). The incidence of each of these diseases in the various African countries is reviewed and whenever the statistics make it possible the extent of the endemics as well as the course and development of the epidemics are discussed with the aid of tables and graphs. Some of the conclusions

<sup>1</sup> The report on the work of the study group appeared in *World Health Organization Report* 1950 23. See also *Clio World Health Organization* 1950 4 91.

<sup>2</sup> *Epidemiol. and Stat. Rep.* 1950 3 161.

<sup>3</sup> Pinkerton H. (1948) *The classification of rickettsial diseases*. In: American Association for the Advancement of Science. *The rickettsial diseases and their control*. Washington p. 64.

## PSYCHIATRIC ASPECTS OF JUVENILE DELINQUENCY

A report prepared on behalf of the World Health Organization as a contribution to the United Nations programme for the prevention of crime and the treatment of offenders will appear in February in English and French in the *Monograph Series of the World Health Organization* <sup>1</sup>

The author of this report, Dr L. Bovet Medecin Chef de l'Office medico pedagogique de l'Etat de Vaud Lausanne Switzerland and WHO consultant in mental health has submitted in a personal synthesis the conclusions reached by him after visiting about 60 institutions in several European countries and in the USA and after discussions with more than 150 specialists in juvenile delinquency

In contrast to the clear and well defined legal concept of juvenile delinquency writes the author neither psychiatry nor psychology can offer any such unequivocal formulation Delinquency is not the name of an illness nor is there one simple specific psychological category for all delinquents Social disadaptation or maladjustment are the basic psychological phenomena of juvenile delinquency but they do not always involve delinquency and all delinquents are not socially maladjusted

Nevertheless to be brought before a court and to be subjected to various measures creates a number of psychological reactions which delinquents have in common and which give a secondary psychological homogeneity to an otherwise heterogeneous group

The author states that few fields exist in which more serious coercive measures are applied on such flimsy objective evidence Research could advance if on the one hand those engaged in it made a personal effort to be objective and if on the other hand public authorities and other interested groups would make available the necessary funds

Until now the organic and the psychogenic concepts of the etiology of delinquency have been in opposition This must cease and research must be orientated to the study of the ways in which constitution and environment soma and psyche are always involved in the manifestations of social maladjustment Experience particularly that of the postwar period has shown the importance of environment social insecurity or a too low standard of living may lead to delinquency in the case of children who formerly have shown no important physical or psychological abnormalities The correlation between social and psychological factors is still too little known A study of them would be of great practical interest since social action is often easier than psychological action The author cites the Chicago Area Project which is endeavouring to limit the effects of harmful social factors by getting the families themselves to co operate

is moderate. Its existence in tropical French Africa has never been proved, on the other hand, it is endemic in the Belgian Congo (region of Kivu) and in the Ruanda Urundi, in Urundi it has been epidemic.

*Murine typhus* is not very frequent in French North Africa and does not become epidemic. It has been noted in certain Egyptian ports and in the Suez Canal zone. It is endemic in Eritrea and Ethiopia. In French tropical Africa, it is widespread in Senegal and French Guinea, in Middle Congo, and in Ubangi Chari. In the Belgian equatorial African territories the virus has been identified in the rats of Coquilhatville, Leopoldville, Matadi, Elisabethville, Tshikapa and Costermansville, and some human cases have been diagnosed in these localities.

Cases of *tick typhus* have been observed in the Anglo Egyptian Sudan. This disease is widespread in Ethiopia and Eritrea and is found sporadically in both Europeans and Africans in Somaliland, Kenya, Tanganyika, Nyasaland, and in West Africa on the Gold Coast and in Sierra Leone. In the Union of South Africa 'tick bite fever' is widespread in the veldt where it occurs mainly in the spring and autumn.

*Boutonneuse fever* is fairly frequent in North Africa, particularly in the towns. The inoculation sore is not consistent and is sometimes replaced by a conjunctivitis which indicates the portal entry of the virus. Boutonneuse fever has been recorded in Senegal, Guinea, Togoland, the Cameroons, in Ubangi Chari and in the Middle Congo and it is suspected in the Haute Volta. Nevertheless, the etiological agent has not yet been isolated in any of these territories.

As regards *Q fever*, extensive investigation is essential before the area of dissemination of the disease in Africa can be defined. Its virus "has been isolated from various kinds of ticks in Morocco, Algeria and in the Sahara. The disease has been found in man in Ubangi Chari and its presence in the west of the Transvaal has recently been proved serologically."

As for *trench fever* and *mite borne typhus* their existence on the African continent has not yet been definitely proved. In conclusion the authors cite certain diseases observed in tropical Africa which according to recent research can be considered as probably belonging to one or other group of the rickettsioses. These diseases are climatic fevers, African pseudo dengue, African tropical typhus, Congolese typhus and, in particular, Congolese red fever which was the subject of a study published in the *Bulletin of the World Health Organization*.

An extensive bibliography including some 450 references to papers which have appeared since 1936 is given at the end of the article.

first three years at least the prevention of psychopathic manifestations—child guidance services can play an important part here special teaching for mental defectives and psychological and psychiatric treatment for hospitalized children Effective prevention can be achieved only by doctors psychologists social workers re educators and magistrates working together in teams Child guidance teams such as exist today in some parts of Europe and the USA appear to be one of the most effective ways of obtaining this co operation

In the last part of the report Dr Bovet deals with the problem of the treatment of delinquency Here psychiatry plays a more limited role than in prevention Observation diagnosis out patient or institutional treatment parole and after care on leaving the reform institution—all these stages or aspects of treatment are examined in the report The need for those dealing with juvenile delinquency to possess some technical knowledge to have a good standard of general education and to be emotionally stable is stressed The common primary aim of any treatment is that of enabling a juvenile delinquent to build up stable and secure interhuman emotional relations the proof of a feeling of inner security which is itself a foundation for his moral independence and consideration for others and without which no human behaviour can be truly adapted to the demands of society

An extensive bibliography comprising 140 references adds to the value of the report

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## *Notes and News*

### **Conference of South East Asia Health Directors**

A WHO sponsored conference of more than thirty directors of public health services from Afghanistan Burma Ceylon India (seventeen States of the Indian Republic and French and Portuguese India) Indonesia and Thailand was held in Kandy Ceylon during the last week of September This was the first technical conference of its kind ever held in Asia

Major General S L Bhatia Director of Public Health for Hyderabad served as Chairman and Colonel C K Lakshmanan Director of the All India Institute of Public Health at Calcutta as Rapporteur Dr C Mani Director WHO Regional Office for South East Asia addressed the opening meeting and asked members to furnish WHO with guidance for the development of the region's health services to aid the Organization in planning and implementing practical programmes of assistance

Throughout the conference there was evident a feeling of frustration due to the lack of adequate finances for health programmes and to the difficulty of convincing governments of the wisdom of spending more for the protection and promotion of health It was proposed that public loans be used to finance all aspects of public health



in the improvement of their living conditions. Such efforts should be imitated elsewhere.

Ideas concerning constitutional psychopathy and its relation to anti social behaviour vary from country to country and from continent to continent. Modern research on the physiology of the autonomic nervous system, the significance of the electro encephalograph, the incompatibility of blood factors and traumata at birth will all contribute to knowledge of the part played by somatic factors in the genesis of antisocial behaviour.

The correlation between mental deficiency and delinquency, which was accepted for a long time without question, is today much debated. It appears probable that because of their mental instability and suggestibility mental defectives become more easily victims of unfavourable psychological and social circumstances. Organic disease and disabilities (syphilis, head injuries, epilepsy, etc.) do not play a preponderant part in the etiology of antisocial behaviour.

Among disturbances in the psychological development of personality which can play a part in delinquency, Dr. Bovet mentions qualitative defects of the super ego, the super ego of the child containing an antisocial element leading to delinquency, partial retardation of development, especially those springing from early emotional frustrations, psychoneuroses and isolated neurotic symptoms, such as the need for self punishment, primary aggression, and the feeling of being abandoned.

The harmful influence of the cinema, radio, and press—although often held responsible—still remains an unproven hypothesis. As regards alcoholism, it is the disastrous consequences resulting from 'the psychological effects of alcoholic parents on the home atmosphere' which are of concern, rather than a so called alcoholic heredity which has not been scientifically demonstrated.

In the light of the preceding considerations, juvenile delinquency appears to have a threefold origin: biological, psychological, and social. The author considers that insecurity is the common factor in its multiple origin. Insecurity gives rise to anxiety, and the latter tends to set free aggressiveness which may take the form of harmless or dangerous acts. In most people these acts give rise to a feeling of guilt, which in turn produces further anxiety. This vicious circle is one of the commonest aspects of the problem of juvenile delinquency.

Far from being considered merely as a way of decreasing adult delinquency, prevention of juvenile delinquency may be regarded from a much wider viewpoint, justifying a crusade for mental health, just as the fight against tuberculosis has grown into a veritable public health crusade. In the second part of his report, Dr. Bovet analyses the various forms which this prevention may take, according to the fields in which it is to be carried out. He mentions sociological measures, those for example, which enable a mother to be constantly with her child from birth and during the

Since this project covered a relatively small area and was carried out for a short period of time the results are to be regarded as preliminary. Many more similar experiments will have to be conducted before it is possible to confirm these favourable effects of malaria control on agricultural production.

### New Series of WHO Publications

The Monograph Series of the World Health Organization has been launched with the publication in both English and French of Dr L. Bovet's study "Psychiatric aspects of juvenile delinquency"<sup>1</sup> which appeared in French only in volume 3 number 1 of the *Bulletin of the World Health Organization*. The new series of publications is to include reprints and in some cases complete translations of articles originally published in the *Bulletin*. Second in the series will be Dr J. Bowlby's report "Maternal care and mental health" which is to be published in English and French editions in March.

### Trachoma Control Campaign Launched

A large scale campaign against trachoma among the Arab refugees from Palestine in the Eastern Mediterranean Region has been undertaken by WHO. This programme in which the newer antibiotics—chloramphenicol, terramycin and aureomycin—are being used is under the direction of one of the world's leading specialists in trachoma, Professor G. Bietti of the University of Parma, Italy. The antibiotics are being supplied

FIG. 8. TRACHOMA CONTROL AMONG PALESTINE REFUGEES



Eye clinic at refugee camp

by Italian and US drug manufacturers with the United Nations International Children's Emergency Fund (UNICEF) furnishing additional quantities as may be required.

The WHO project which will be carefully controlled is expected to make an important contribution to present knowledge concerning the efficacy of the antibiotics in the treatment of trachoma. The treatment of many thousands of cases will also permit determination of the best method of administration of the drugs, of optimum dosage, and of the financial cost of a complete trachoma-control campaign. Initial results will probably be ready for publication in the first half of 1951.

The most serious obstacle to improvement of standards of health it was agreed, is lack of trained health personnel. On the average there is throughout South East Asia only one doctor and one rural dispensary to care for each forty thousand or more of the population. The solution suggested was rapid training of an adequate number of health workers—short training courses being provided for medical assistants who would be recruited in large numbers. Such partially trained personnel could, under the supervision of medical graduates, cope with the majority of common diseases and health problems in rural areas and could also aid in collecting vital statistics. The conference recommended that WHO and other United Nations agencies assist in creating long term projects for training facilities. However, mindful of the local financial implications of such programmes, the delegates warned against training more personnel than could be absorbed.

The conference also stressed the need for comprehensive public health acts in every State and for combining the curative and the preventive aspects of health work—something still lacking in most areas. The necessity was expressed for giving directors of health direct access to health ministers without the intermediary civil servant.

With regard to maternal and child health, emphasis was laid on the development of paediatrics, both clinical and social. The provision of midday meals in all schools, with the help of a governmental or municipal subsidy, was recommended.

The conference considered that environmental sanitation in the region had been so badly neglected in the past that the tragically high mortality from intestinal diseases, especially among children, had come to be accepted as a normal feature of life in the rural areas.

### Increased Agricultural Production from Malaria Control

Statistics on summer crops in 1950 by Mr Mansur Ahmed, Agricultural Officer attached to the WHO Malaria Control Demonstration Team in Gouripur, East Pakistan, provide a remarkable demonstration of how malaria control in a highly endemic area may beneficially influence general economy and food growing capacity of a country.

FIG 7. MALARIA CONTROL IN EAST PAKISTAN



Ploughing in water covered field in East Pakistan where malaria control measures have increased crop yields

These statistics show that in the DDT sprayed area the yield of crops increased by 15%, and the man hours of labour expended per acre decreased by 10% as compared with figures for the unsprayed control area. Another observation was that in the sprayed area no working hours were lost because of sickness while in the unsprayed area working hours lost as a result of malarial and allied fevers amounted to 2.2 /

FIG 3 48TH ANNIVERSARY OF THE PAN AMERICAN SANITARY BUREAU



Speakers on the platform. Left to right: Dr. F. J. Brady, Assistant Chief, Division of International Health, U.S. Public Health Service; Dr. M. E. Bustamante, Secretary General, Pan American Sanitary Bureau; Dr. L. L. Williams, Jr., Chief, Division of International Health, U.S. Public Health Service; Dr. F. L. Soper, Director, Pan American Sanitary Bureau; Dr. E. L. Stebbins, Director, School of Hygiene and Public Health, Johns Hopkins University; Dr. W. Manger, Assistant Secretary General, Organization of American States; Dr. J. R. Murdock, Assistant Director, Pan American Sanitary Bureau; and Dr. H. van Zile Hyde, Director, Health and Sanitation Division, Institute of Inter American Affairs.

of international health activity. In a sorely troubled world searching for some common ground on which nations may work together for the improvement of the lot of mankind public health stands out as a rallying point for international co-operation unhampered or at least less hampered by political and ideological pressures than almost any other area of international contact." All of the speakers paid tribute to the important contributions which the Pan American Sanitary Bureau has made to international public health and expressed satisfaction in its joining forces with WHO.

### Studies on BCG Vaccination

A series of studies on BCG vaccination planned as a co-operative undertaking of the Joint Enterprise, the Statens Serum Institut, Copenhagen, and the WHO Tuberculosis Research Office, also in Copenhagen, is appearing in the *Bulletin of the World Health Organization*. The first of the series, published in volume 3, number 1 of the *Bulletin*, has as subject, "Effect of age of vaccine and variation in storage temperature and dosage on allergy production and vaccination lesions ten weeks after vaccination." The second, published in volume 3, number 2, is entitled, "Effect of variation in dosage of BCG vaccine on allergy production and vaccination lesions nine weeks after vaccination." It is hoped that these studies will throw new light on BCG vaccination and will solve some of the problems in its administration.

## Malaria Control in Iran

A report recently received at the WHO Regional Office for the Eastern Mediterranean indicates that the antimalaria demonstration project in Iran is progressing satisfactorily. Since early last spring 70 000 000 m<sup>2</sup> of surface in 404 690 houses have been sprayed with DDT, an operation affording protection to about 700 000 persons.

Team personnel consists of local doctors and other experts including a WHO trained entomologist. Technical assistance is given by Professor M. Giaquinto, who is in charge of the WHO malaria advisory team. Mr C. Garrett Jones, entomologist and Mr P. Stevens, a sanitary engineer. A central laboratory for evaluating the results of the epidemiological and entomological surveys undertaken by the teams is being established at Teheran.

Malaria represents a serious obstacle to economic development in Iran and it is expected that long term achievements of control measures will include a considerable expansion in agricultural production.

## Dental Health Survey in Middle East

Dr P. E. Blackerby, Jr., Director of the Division of Dentistry, Kellogg Foundation, Battle Creek, Mich., USA, now serving as a temporary WHO consultant, visited Egypt and Iran to survey dental health needs. He had previously visited Belgium, France, Holland, Sweden and the United Kingdom. Particular points of interest in Dr Blackerby's inquiry were the training of dental personnel, governmental dental health service programmes and the public health or preventive aspects of dental health.

## Leprosy Treatment Demonstrated in Ethiopia

The use of sulphetrone, one of the latest antileprosy drugs, has been demonstrated in Ethiopia, where there are estimated to be 15 000 to 20 000 leprosy cases. The demonstration was carried out by Dr M. A. K. Daleamouni, whose services were lent to WHO by the Egyptian Ministry of Public Health, of which he is Director of the Leprosy Section. Dr Daleamouni has had considerable success with sulphetrone in Egypt in the treatment of some 4 000 cases. WHO supplied 230 000 g of the drug, together with syringes and needles for its administration for the demonstration, concerning which a report will be made to Sir Aly T. Shousha, Pasha, Director of the WHO Regional Office for the Eastern Mediterranean.

## 48th Anniversary of Pan American Sanitary Bureau

The Pan American Sanitary Bureau, WHO Regional Office for the Americas, celebrated its 48th anniversary on 2 December 1950. Dr F. L. Soper, Director of the Bureau, acted as Chairman at the celebration ceremony at which messages were read from US President H. S. Truman, WHO Director General Dr Brock Chisholm and others. President Truman's message read in part:

The achievements of the Pan American Sanitary Organization since its founding have received recognition from public health authorities the world over. We look for even greater accomplishments by the organization in the future as it works toward attainment of better health conditions for the people of the Americas and thereby contributes to an advancement of their economic and social well-being.

Principal speakers were Dr Soper, Dr W. Manger, Assistant Secretary General, Organization of American States, and Dr E. L. Stebbins, Director, School of Hygiene and Public Health of Johns Hopkins University, Baltimore, Md., USA. Dr Stebbins, in discussing "The future of international public health relations," commented: "If we may judge from the experiences of the last few years, there is evolving a new concept

# Views on WHO

## WHO FAO and Nutrition

In connexion with the report on the first session of the Joint FAO/WHO Expert Committee on Nutrition<sup>1</sup> the following note appeared in a recent issue of the *Lancet* London (1950 2 580)

Two United Nations agencies WHO and the Food and Agriculture Organisation (FAO) both have nutrition sections and a joint expert committee was set up to coordinate them. This met for the first time in Geneva a year ago and the report of its first meeting has now been published. In brief it recommended the continuance of established policies—notably the co-ordination of technical knowledge by the organisation of regional nutritional conferences the publication of technical memoranda and the promotion of education primarily by the award of travelling fellowships. In these ventures FAO will lay emphasis on nutrition in relation to the production distribution and consumption of food in WHO emphasis will be on nutrition in relation to the maintenance of health and the prevention of disease. In these fields both FAO and WHO have already proved their ability

and we can look forward to hearing fresh accounts of good work

A new recommendation put forward by the committee was that WHO should itself undertake field research and endemic goitre and kwashiorkor were considered suitable subjects for investigation. This would be an important new departure. The question whether UNO is a suitable organisation for initiating and planning new research has already been debated at length. Such projects are bound to meet two difficulties. The first would be to recruit first-class investigators at a time when almost all countries are short of scientists of the front rank it would be hard to collect a good international team without seriously weakening national research services. Secondly an international research group would have to be very circumspect if it was to maintain harmonious relations with research workers and officials in the country in which it was operating. True this is no fundamental objection but it is easy to visualise real difficulties arising in practice. Certainly it would not be easy for FAO and WHO as discoverers of new knowledge to repeat the successes which they have already achieved as coordinators of research and as educationists.

<sup>1</sup> *World Health Organisation Report* 1950 16

## Chinese Edition of the Chronicle

Publication of the Chinese edition of the *Chronicle of the World Health Organization* was recently resumed in Hongkong. Numbers 1, 2 and 3 of volume 3 (1949) have appeared in a single issue and will shortly be followed by other numbers. Copies of the *Chinese Chronicle* are available on request made to the WHO Temporary Regional Office for the Western Pacific, P.O. Box 3247, 48 Kadoorie Avenue, Kowloon, Hongkong.

## Weekly Epidemiological Bulletin Now on Sale

The *Weekly Epidemiological Bulletin* published by the WHO Regional Office for the Eastern Mediterranean, previously distributed free of charge to national health administrations and to health services at ports and frontiers in the region, is now on sale at a price of 2 piastres a copy. This *Bulletin*, which was originally issued by the Regional Sanitary Bureau for the Near East and later by the Pan Arab Regional Health Bureau, contains notifications concerning diseases designated as pestilential in the International Sanitary Conventions, as well as information about the application of the Conventions. It is a mimeographed bilingual report published in English and French. Requests for this publication should be addressed to the WHO Regional Office for the Eastern Mediterranean, P.O. Box 1517, Alexandria, Egypt.

## WHO Director-General Receives Honorary Degree

The University of Nancy, France, at its ceremonies opening the new academic year conferred the degree of Doctor Honoris Causa of the University and of the Medical Faculty on Dr. Brock Chisholm, Director General of WHO. The ceremonies were presided over by the French Minister of Education, M. P. O. Lapie. Professor J. Parisot, Dean of the Medical Faculty of the University, presented Dr. Chisholm and spoke of the Director General's career and of the work of WHO. In his reply, Dr. Chisholm praised the co-operative interest of France in the Organization's activities and paid tribute to Professor Parisot as a forerunner of medicine's new orientation toward social hygiene. He accepted the honour as one bestowed upon WHO, its true object, and saw in it a symbolic and hopeful manifestation of the constructive role that the medical elite of the world can play in fostering international understanding for the greater good of mankind.

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This new WHO series contains reprints and translations  
of important studies originally published in the  
*Bulletin of the World Health Organization*

No 1

LUCIEN BOVET

**PSYCHIATRIC ASPECTS  
OF  
JUVENILE DELINQUENCY**

While according to law juvenile delinquents form a homogeneous group according to the psychiatrist they comprise various types of socially maladjusted children. Whether the criminal tendencies of these delinquents derive from adverse social factors, uncertain material or emotional conditions, or instability through psychological disturbances they inevitably lead to feelings of insecurity, out of which are born anxiety followed in a vicious circle by aggressiveness, feelings of guilt, and further anxiety.

Any rational prophylaxis must be directed against the basic disorders of which juvenile delinquency is a sign. The problem can perhaps be approached most successfully through close co-operation between doctors, psychologists, social workers, re-educators and magistrates, as in the existent child guidance teams. In fact juvenile delinquency must become the starting point and *raison d'être* of a vast mental health campaign.

The primary aim of treatment is that of enabling a juvenile delinquent to build up stable and secure interhuman relations, the proof of a feeling of inner security which is itself a foundation for his moral independence and consideration for others, and without which no human behaviour can be truly adapted to the demands of society.

These few conclusions are drawn from Dr. Bovet's extensive review of the established facts and generally accepted theories on juvenile delinquency, its etiology, prevention and treatment. The impressions gathered during a tour of America and Europe, where Dr. Bovet consulted over 150 specialists on juvenile delinquency and visited many institutes, help to make this an up-to-date account whose object has been to set out the multiplicity of the problems involved rather than to solve them.

The report was prepared on behalf of the World Health Organization as a contribution to the United Nations programme for the prevention of crime and the treatment of offenders. It is written therefore not merely for the specialist but for the intelligent reader who is aware of the vital importance of this problem.



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## RECENT AND FORTHCOMING MEETINGS

1950

- 2 9 November WHO Expert Committee on International Epidemiology and Quarantine Legal Subcommittee third session Geneva
- 6-7 November WHO Expert Committee on the Unification of Pharmacopoeias Subcommittee on Non Proprietary Names first session Geneva
- 6-11 November WHO Expert Committee on Biological Standardization fourth session Geneva
- 6-13 November FAO/WHO Expert Panel on Brucellosis first session Washington
- 27 November Commission for Technical Co operation in Africa WHO Malania
- 9 December Conference in Equatorial Africa Kampala Uganda
- 11 12 December Preparatory Working Group on a Public Health Administration Seminar Geneva
- 11 16 December WHO Expert Committee on Malaria fourth session Kampala Uganda
- 11 16 December WHO Expert Committee on Mental Health Subcommittee on Alcoholism first session Geneva
- 11 16 December Joint WHO/FAO Expert Group on Zoonoses first session Geneva

1951

- 8 30 January WHO Executive Board Standing Committee on Administration and Finance Geneva
- 22 January WHO Executive Board seventh session Geneva
- 5 February
- 30 January Léon Bernard Foundation Committee Geneva
- 9 April 5 May WHO Special Committee to consider the Draft International Sanitary Regulations prepared by the Expert Committee on International Epidemiology and Quarantine Geneva
- 10-17 April Joint FAO/WHO Expert Committee on Nutrition second session Rome
- 19 28 April WHO Expert Committee on the Unification of Pharmacopoeias eighth session Geneva
- 30 April 1 May WHO Expert Committee on the Unification of Pharmacopoeias, Subcommittee on Non Proprietary Names second session
- May WHO Expert Committee on International Epidemiology and Quarantine Legal Subcommittee fourth session Geneva
- 7 May Fourth World Health Assembly Geneva
- 28 30 May WHO Consultative Committee for Europe Geneva
- 31 May Joint Committee on Health Policy UNICEF/WHO fifth session Geneva
- 4 16 June WHO Executive Board eighth session Geneva

## SEVENTH SESSION OF EXECUTIVE BOARD

The seventh session of the Executive Board held in Geneva from 22 January to 5 February 1951 was presided over by Dr H S Gear. Lt Col M Jafar and Professeur M De Laet were Vice Chairmen. Professor G A Canaperia served as Rapporteur. Major decisions were reached on the basis of recommendations of the Standing Committee on Administration and Finance whose twelve meeting session immediately preceded that of the Executive Board. This committee was composed of Dr C van den Berg, Dr D Boide, Dr F J Brady, Dr C K Lakshmanan, Dr M Mackenzie and Dr A Siampar. Dr Siampar served as Chairman and Dr Brady as Rapporteur. The absence through illness of the committee's Chairman, Sir Arcot Mudaliar, was noted with regret.

The Executive Board met in an atmosphere marked by an awareness of the "changed context in which the World Health Organization is now functioning". Apart from political situations which have certain disrupting and complicating effects on the work of the Organization, the Executive Board had to consider some of the recent developments which are likely to influence the programme, methods of work and budget of WHO. Among these the gradual change from centralized to decentralized planning and activities, the coming into being of the Technical Assistance Programme and the increasingly close co-operation with organizations such as the United Nations International Children's Emergency Fund (UNICEF)—which has become to a certain extent a new international health organization—have all created new problems. In the words of the Director General, "In effect WHO is now dealing with the technical aspects of health programmes amounting to many millions of dollars actually in the region of hundreds of millions of dollars". The Executive Board therefore was concerned not only with considering a definite programme and the financial resources necessary for its implementation but also with problems of international co-operation in health assistance on a much larger scale than ever before.

Budgetary considerations always an important item assumed new significance in the light of these new developments. The Board decided that the expenditure level for 1951 should remain at \$6 150 000 plus an amount of \$82 057 transferred from the Office International d'Hygiène Publique making a total of \$6 232 057. Finding new financial resources for the Organization has always been a major concern of delegates at the World Health Assemblies and of members of the Executive Board. The Third Health Assembly proposed that Member States might raise funds

by the sale to the public of special world health stamps labels, or flags.<sup>1</sup> The Board at this session, gave its sanction to the proposal and officially suggested to Member Governments that where possible, they should consider issuing special world health stamps or labels and selling flags, the monies raised by these means to be divided between WHO and the national health administrations on an agreed basis.

### Budget and Programme for 1952

By far the most controversial issue at meetings of both the Standing Committee on Administration and Finance and the Executive Board was the 1952 budget to be presented to the Fourth World Health Assembly. The Director General had proposed a budget totalling \$8,703 251, as compared with the \$7 300 000 approved by the Third Health Assembly for the year 1951. This increase was warranted, the Director General felt by the necessity for WHO to expand and assume full responsibilities as an international health organization, particularly since other organizations and agencies were beginning to play an increasingly large role in international health programmes. Part of the proposed increase was due to provision in the 1952 budget for the technical personnel required in joint UNICEF/WHO projects the services of which have been financed in the past largely by UNICEF funds. The Fourth Health Assembly will have to decide if and to what extent the budget should be increased for this purpose.

Those who opposed the increase in the budget maintained that it was unrealistic in view of the difficulties which some Member States had in meeting their financial obligations to the Organization and of the inactive status of ten of the Members. On the other side of the ledger however, it was pointed out that the Regional Committee for South East Asia had recommended a 20% increase in the budget and that Members of that region had indicated their willingness to increase their contributions accordingly.

After much discussion in sessions of both the Standing Committee and the Executive Board a proposal which represented a 9% decrease in the Director General's estimates was accepted. This meant that the total assessed budget for 1952 to be presented to the Fourth Health Assembly should amount to \$8 600 000. If the Assembly decides not to assess certain Members of the Organization in 1952 the assessment budget should be \$7 200 000.

In the course of deliberations concerning the 1952 budget and programme it was emphasized that with the exception of staff costs involved in providing international personnel which is withdrawn when WHO assistance terminates budgets for demonstration projects should not

exceed an amount which could reasonably be afforded by national governments in continuing the projects after outside aid has been withdrawn. Attention was also called to what is likely to become a major problem if the Organization's activities are greatly expanded—lack of adequate qualified personnel. The Director General expressed the opinion however that the implementation of the proposed programme would depend more on junior personnel than on the services of highly trained experts and he felt that the Organization was well equipped to meet the necessary requirements.

### Technical Assistance Programme

The Expanded Programme of Technical Assistance for the Economic Development of Underdeveloped Countries which was discussed at considerable length at the Third World Health Assembly<sup>2</sup> is taking an increasingly important part in WHO activities. The Executive Board examined a progress report on this programme and drew the attention of the Technical Assistance Committee to the desirability of examining the necessity for long term planning and in particular for contributors to technical assistance funds to continue their contributions over a period of several years so that participating organizations may initiate and carry out long term projects. The progress report revealed that as of 20 January 1951 WHO had received 51 requests from 35 countries for assistance under the provisions of the Technical Assistance Programme. These requests cover all aspects of public health services. In planning its technical assistance programme as in planning its regular programme WHO is concentrating on projects which will be of the greatest value in developing adequate self-supporting national health services taking into consideration the absorptive capacity of the countries receiving assistance.

### Continuing Needs of Children

One of the instances in which co-operation with other international organizations has resulted in numerous projects of considerable magnitude is in joint UNICEF/WHO activities. The financial resources of the former are large and have made possible a number of programmes in maternal and child health malaria control etc. The Executive Board welcomed additional indications of close co-operation with UNICEF and increasing co-ordination at the planning stage in assisting governments to develop their health programmes resolved to draw the attention of the Fourth Health Assembly to the United Nations General Assembly resolution concerning the continuing needs of children and recommended uninterrupted continuation of the Joint Committee on Health Policy UNICEF/WHO.

## Regional Organizations

The Executive Board noted that the Pan American Sanitary Conference, which acts as the WHO Regional Committee for the Americas, has decided to retain Washington as the site of the headquarters of the Pan American Sanitary Organization and that as agreed with the United Nations, the Regional Office for the Americas will therefore continue to be located in Washington. Dr F. L. Soper was reappointed as Director of this regional office for a period of four years, beginning 1 February 1951.

In considering the activities of the Western Pacific Region the Board noted the rapid expansion of the facilities of the temporary office for the region but decided that because of the present situation in that area, the proposed 1951 meeting of the Regional Committee for the Western Pacific would have to be postponed.

With regard to a regional organization for Europe it was recommended that complete regionalization should not be undertaken at present. A consultative committee of representatives of the governments concerned will be convened in 1951 to discuss future plans for the Organization in Europe.

## Relief Activities

WHO's increasing number of relief activities necessitated by political developments in various parts of the world presents new problems—financially and administratively. The Executive Board approved extension of the agreement between the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWAPRNE) and WHO so that the Organization might continue to give aid to UNRWAPRNE projects relating to health. It endorsed the commitments made by the Director General to the Secretary General of the United Nations in connexion with relief for the civilian population in Korea and discussed ways and means of financing the supplemental budget for 1951 which this entails. It also dealt with a request from the Government of Turkey for aid in solving the health problems created by a recent influx of refugees from Bulgaria. This emergency has resulted from the Bulgarian Government's asking that Turkey admit within a short space of time 250 000 members of the Turkish minority living in Bulgaria. The WHO Executive Board authorized the Director General to withdraw a sum not to exceed \$55 000 from the Working Capital Fund to provide medical supplies to help in this emergency use of the supplies to be supervised by a public health officer provided through the Regional Office for the Eastern Mediterranean. It requested the Director General to consult with the United Nations and other relevant agencies and non governmental organizations on the proper way to handle this and similar emergency situations which may arise in the future.

## Expert Committees

The Executive Board examined the reports of the expert committees and other advisory groups which had met since its last session. Highlights from resolutions on these reports follow.

### *Biological standardization*

The Director General was requested to study (a) the recognition of an international blood grouping reference laboratory (b) the conversion of the International Salmonella Centre at the Statens Serum Institut Copenhagen into an International Salmonella and Escherichia Centre and (c) the establishment of international shigella centres at Atlanta Georgia USA and Oxford United Kingdom.

### *Mental health<sup>4</sup>*

It was decided that existing experiments in the training of public health mental hygiene specialists should be studied and this subject placed on the agenda of a future meeting of the Expert Committee on Mental Health.

### *Malaria*

The attention of the competent authorities of the Member Governments responsible for the administration of African territories is to be drawn to the desirability of initiating experimental schemes of malaria control and eventual vector species eradication. WHO's willingness to consider giving technical assistance to an approved scheme being indicated.

### *Subcommittee on Serology and Laboratory Aspects Expert Committee on Venereal Infections and Treponematoses<sup>5</sup>*

Endorsement was given to the recommendations that descriptions of cardiolipin and lecithin be included in the *Pharmacopoea Internationalis* and that preliminary standards for these substances be established. Postponement of the International Serological Laboratory Conference was accepted until pilot experiments on the usefulness of freeze dried sera for the evaluation of serological tests have been studied since the plans for the conference might be changed if dried reference sera of various levels of sensitivity from syphilitics and non-syphilitics are proved to be adequate for evaluating serological tests.

### *Unification of Pharmacopoeias*

The Board recommended to the Fourth World Health Assembly the taking over by WHO in application of Article 72 of the Constitution of

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the functions of the permanent International Pharmacopoeia Secretariat previously performed by the Belgian Pharmacopoeia Commission

### *Joint FAO/WHO Expert Panel on Brucellosis*

It was recommended that activities of the FAO/WHO brucellosis centres be developed along lines of research and training and that the centres (a) co ordinate field and laboratory procedures used in the study of brucellosis and (b) undertake a worldwide survey on the prevalence of brucellosis in livestock and the measures being taken in various countries to combat the disease. Attention was called to the advisability of systematic reporting by competent authorities, of the incidence of brucellosis in man and animals

### *Joint WHO/FAO Expert Group on Zoonoses*

The Board (a) called the attention of competent authorities to the appreciable contributions to public health and national economy which could be effected by practical measures against bovine tuberculosis hydatidosis and anthrax where these diseases are prevalent, (b) stressed the importance of establishing satisfactory arrangements in national health administrations so that special attention might be given to diseases of animals transmissible to man and to the inspection and hygiene of foods of animal origin and (c) agreed that WHO undertake further study and co ordination of international efforts in collaboration with other specialized agencies and international organizations wherever possible to combat the major zoonoses for which activities have not already been undertaken, particularly virus encephalitides tularaemia and leptospirosis

### **Other Matters**

The Executive Board approved, and transmitted to the Fourth Health Assembly, the general programme of work for the period 1952-5 inclusive<sup>6</sup>. This programme of work the purpose of which is to supply broad general lines of policy to serve as a framework for the development of detailed annual programmes and budgets for the period specified has as general principles (a) participation of all countries in the work of the Organization (b) provision of services of a type to help governments to develop their own health services (c) stimulation and co ordination of medical and scientific research and (d) availability of services to all Member States without discrimination

Certain diseases were given special consideration by the Board. The prevalence of tropical ulcer and the hampering effect of this disease on economic development in many parts of the world was called to the Board's

attention by the Government of Haiti. Although budgetary limitations made it impossible to recommend that WHO subsidize research on tropical ulcer, the Board encouraged laboratories to undertake studies of the disease.

A memorandum on the problem of leprosy submitted by the Government of the Republic of the Philippines led the Executive Board to request the Director General to place on the agenda of the Expert Committee on Leprosy to be convened in 1952 the following topics: (a) the status of sulfone therapy effectiveness of the different preparations in use their dosage side effects and manner of administration; (b) the adoption of a generally acceptable classification of the disease; (c) the adoption of fundamental principles as a guide to selecting methods of control in endemic countries; and (d) the public health significance of the changing of the lepromin test from negative to positive either by the application of sulfones or by BCG vaccination.

A study on the development of arid zones has been initiated by the United Nations with the co-operation of the specialized agencies. The WHO Executive Board noted the resolution of the UN General Assembly on this project, pledged its support to UNESCO, emphasized the importance of early planning of programmes to prevent the introduction or aggravation of disease hazards caused by the development of arid zones, and called the attention of the Fourth World Health Assembly to this special problem.

It was recommended that the Tuberculosis Research Office, Copenhagen, which has done much valuable work, be maintained, subject to review of the situation by the Executive Board every two years. The Board requested that special emphasis be given to control studies to determine the value of BCG vaccination, the duration of its effect, and related technical field and laboratory studies bearing directly on the evaluation and practice of BCG vaccination.

The establishment of pilot public health centres, a proposal of the Government of the Republic of the Philippines, was approved by the Board as an effective method of helping underdeveloped countries to initiate public health services. The Director General was requested to consider this type of project when planning services with governments and developing the health demonstration areas proposed in the 1952 programme.

The Board also gave its approval to WHO's co-operation in plans for establishing international research laboratories, approving the policy on specific projects suggested by the Committee of Scientific Experts on International Research Laboratories, which was convened jointly by the United Nations and UNESCO in August 1949 and at the meeting of which WHO was represented.

The Executive Board noted with satisfaction the establishment of a health information centre by the Pacific Science Council, the executive body of the Pacific Science Association, which consists of representatives

of the principal research and science organizations of Australia, Canada, France, Hawaii, Indochina (Viet Nam), Indonesia, Japan, the Netherlands, New Zealand, the Philippines, the United Kingdom and the USA.

The problem of refugee physicians which was noted at the Third Health Assembly,<sup>8</sup> was again a subject of discussion. The Executive Board called the attention of Member States to the difficulties in the resettlement of refugee physicians and recommended that legislation be adopted to enable the services of duly qualified and acceptable medical personnel to be utilized. A Medical Register, giving personal details and qualifications of each refugee physician screened by the International Refugee Organization (IRO), is available through IRO.

The Executive Board discussed in some detail the agenda and working methods to be adopted at the Fourth World Health Assembly. It was decided that technical discussions would be confined to the subject of the education and training of medical and public health personnel. Interpretation into Spanish will be used for the first time at the Assembly.

The eighth session of the Executive Board, it was tentatively decided, would be held in Geneva beginning 4 June 1951.

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<sup>8</sup> *Chron. World Hlth Org.* 1950, 4, 36.

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## WHO ACTIVITIES IN SOUTH-EAST ASIA

The WHO Regional Organization for South East Asia was established in October 1948 and the Regional Office opened in New Delhi in January 1949. The Regional Committee, at present composed of representatives of Afghanistan, Burma, Ceylon, India, Indonesia, Thailand and French and Portuguese India, recently held its third session in Ceylon.<sup>1</sup>

The South East Asia Regional Office gave WHO its first experience in decentralization and therefore demanded much pioneer work. Direct assistance to national governments in the form of advisory and demonstration services was new to international health work and required the development of new techniques in co-operation and new attitudes on the part of both the international staff and the national health administrations. Largely as a result of the experience gained by the South East Asia Regional Office, which was established early, WHO has now decided to carry its regionalization policy further and to make regional offices entirely responsible for their own administrations and budgets and in co-operation with the regional committee for drawing up as well as executing regional programmes, a minimum of guidance being given by Headquarters.

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*Chron. World Hlth Org.* 1950, 4, 370.

The South East Asia Regional Office now has a staff of 15 members—from nine different countries—including nine senior officers responsible for policy administration programme execution etc and six specialist advisers in maternal and child health venereal diseases tuberculosis nursing malaria and environmental sanitation

Co operation and co ordination are maintained with UNESCO FAO UNICEF and ILO A very close relationship exists with UNICEF and an increasing number of health projects under the technical direction of WHO are using supplies equipment and in some cases personnel financed

FIG 1 WHO IN SOUTH EAST ASIA — I



Washing arrangements are simple but these children are learning to use them as part of a WHO health education project

by the former At present joint projects are already operating or are being planned in malaria control maternal and child health yaws control and tuberculosis training centres In addition WHO has accepted the responsibility of administering UNICEF fellowships in health subjects

### Malaria

Demonstrations of malaria control in rural areas utilizing DDT were launched in 1949 by six international teams—four in India one in Thailand and one in Afghanistan All but the last are joint projects with UNICEF

The aims of WHO malaria control projects are (1) to demonstrate the increased effectiveness of large scale operations in rural malaria control (2) to establish the most lasting method of disinsectization under local

conditions (3) to initiate measures to improve general sanitation in villages and to increase food production, through rural public health organizations, and (4) to train local workers who will be responsible for carrying on and extending the operations to the surrounding areas

### India

**Teraí** The project in Teraí was the first of its kind in the world. Operations now cover an area of about 3,885 square kilometres which has a population of 110,000. Examination of blood smears of 3 000 infants has revealed a reduction in malaria endemicity from 60% to nil in the sprayed villages. A considerable extension of the work is contemplated, with the assistance of FAO.

**Jeypore Hills** Operations in this area cover about 1,709 square kilometres with a population of approximately 120 000. It is an area of high malaria endemicity, the spleen index being more than 90%. *A fluviatilis*, the responsible vector, has now completely disappeared from all sprayed villages although its density remains high in the control area.

**Malnad** Malnad is located in the north western part of Mysore, where a very scattered population was suffering from fever to such a degree that no extension of cultivation was possible. WHO's operations cover 4 144 square kilometres and serve a population of about 140,000. Complete disappearance of the vector has resulted in general improvement of local conditions. Malaria has not been detected in any of the babies born since spraying operations began.

**Ernad** This is in the Malabar District, in the foothills of the Western Ghats. The area concerned is 368 square kilometres, with a population of about 63 000. It is a typical focus of high malaria endemicity from which the disease is found to be spreading to the low regions so that malaria control in these sparsely populated foothills means the protection of many hundreds of thousands of people in the adjoining areas. In the sprayed area the infant parasite rate is now nil, and *A fluviatilis*, the local vector, appears to have been completely eradicated. The Government of Mysore is taking over the work this spring.

### Thailand

The Thailand project is being conducted in the comparatively small Sarapek district of Chiangmai Province. In spite of a very dense population totalling about 40 000 any extension of rice cultivation was prevented because of high incidence of fever at harvest time. From the first year of spraying operations, *A minimus*, the responsible vector, completely disappeared from the sprayed area although its density continued to be high in the control area. A striking improvement in general health

conditions has led the Government of Thailand to undertake a large extension of the work

### *Afghanistan*

Teams have been operating in two different regions of Afghanistan. In 1949 a pilot team in the Laghman area concentrated on careful checking of the possible results of indoor spraying in a community in which the population sleeps outdoors every night during the malaria season. Complete success was recorded in the first year by killing the vector *A. superpictus* in the houses where it was found to rest during the day.

In 1950 a full strength WHO team undertook another equally successful malaria control operation among the 70 000 population of the Khundus Khanabad area in North Afghanistan. Although it is too early for final assessment of results it may be stated that in all areas the spleen indices among children have been reduced by 50%. The immediate disappearance of severe cases of malaria in adults and of fresh cases among infants has so impressed the populations concerned that the spraying squads are now welcomed everywhere.

Public health nurses attached to each demonstration team have been able to organize maternal and child health clinics in many villages. Each team's headquarters is a small training centre to which local workers are sent for refresher courses and demonstrations.

### **Treponematoses**

In 1949 the first WHO venereal disease team to be sent into the field established its laboratory and headquarters in Simla, central point of the new Himachal Pradesh State in the hills of North India. Mass blood testing carried out by the international team in conjunction with the very able staff provided by the Indian Government soon confirmed a long standing impression that syphilis was widespread in the hill communities. Granuloma inguinale, the presence of which has been known in the area from the time when Donovan described the lesions in another part of India, was also encountered in hospitals and during examinations of people in the villages.

The dramatic response of both of these diseases to antibiotics which for the first time were available free of charge to the people of the area was rapidly publicized. As a result it was not unusual for patients to come from long distances to the central clinic that had been established in Simla.

The clinic and laboratory at Simla served as a training centre for workers from India and other countries in the region. With the help of UNICEF a programme was planned to supply each State whose trainees had completed the requisite course at Simla with minimum laboratory equipment and drugs so that similar projects might be undertaken when

the trainees returned to their countries. The laboratory served to make widely known the simpler slide test techniques, and valuable experience was gained in field testing using the Meinicke test and cardiolipin antigens. The laboratory also functioned as a reference serological laboratory and exchanged samples with other laboratories in India and elsewhere.

One of the highlights of the project was the selection of an isolated community for mass testing and treatment operations. The community yielded a seropositive rate as high as 60% in adults. Treatment was given using one injection of 300,000 units of procaine penicillin G in oil with 2% aluminium monostearate. Although the community's resistance to blood testing has made evaluations difficult, data collected to date, after a year's follow up, leave no doubt that, as a public health measure, such a mass treatment approach has much to commend it.

### *Yaws control*

Nationwide yaws control programmes have been established in Indonesia, where the incidence is 21.3% and in Thailand, where the incidence is estimated at about 20%. Since May 1950, when the Indonesian project was launched, more than 35,000 injections of penicillin have been given in treating a population of 200,000. In Thailand, 11,300 cases have been treated since July 1950.

In both projects, team headquarters usually serve as a training centre for field teams composed each of eight medical workers, nurses, or sanitary inspectors, headed wherever possible by doctors. Ten such teams have already been trained in Indonesia and three in Thailand. In each area, a control group is being established to attempt to solve specific problems.

It is hoped that when lower incidence of the disease has been achieved, continued control will be effected by keeping a careful watch on patients being treated at the polyclinics or health dispensaries in the areas concerned and by keeping one team in readiness in each province or State to deal with any increase in the disease as and when it is detected.

### **Tuberculosis**

A mass BCG vaccination campaign which was started by the Joint Enterprise (International Tuberculosis Campaign) early in 1949 is to be continued until the end of June 1951. In this campaign about 90 Indian teams have been trained. 2,511,089 persons have been tuberculin tested, 1,209,179 persons have been found positive, and 848,296 persons have been vaccinated. It is understood that the Indian Government intends to continue and to extend the campaign after the International Tuberculosis Campaign ceases to function.

BCG vaccination will be fully integrated into the work of six UNICEF/WHO tuberculosis training centres which are to be opened in South East Asia during 1951. The object of these centres is to provide in each country of the region one or more model centres with modern equipment where international personnel will demonstrate up to date methods of tuberculosis control and will train local teams give postgraduate instruction to individual specialists train nurses and technicians and offer refresher courses to general practitioners. The keynote of the work at the centres will be team activity such as has been the main feature of effective tuberculosis control in the Scandinavian countries and elsewhere. It is hoped that centres in Delhi and Trivandrum will be opened early in 1951 a third centre is to be established at Patna a couple of months later. Centres planned for Ceylon (Colombo) Burma (Rangoon) and Thailand (Bangkok) should also be started during the first half of 1951.<sup>3</sup> BCG vaccination has already been introduced in Ceylon and this project will be grafted onto the general tuberculosis programme as in the case of India. Vaccination against tuberculosis has not yet been undertaken in Burma and Thailand however and it is intended to import BCG teams for demonstration and training in vaccination and to link their activities with the other work of the centres.

A field demonstration project and later a BCG vaccination team are planned for Afghanistan. A BCG project is also planned for Indonesia.

### **Typhus**

In July 1949 louse borne typhus which is always present in Afghanistan flared up to epidemic proportions. At the request of the Afghan Government WHO sent antityphus vaccine DDT powder and dust guns. Typhus control activities were continued during 1949-50. WHO medical officers and sanitarians being sent to assist in organizing and carrying out an antityphus campaign.

WHO malaria team members are actively engaged during the winter months in taking preventive measures against any possible outbreak of typhus in Kabul and Kandahar.

### **Maternal and Child Health**

The countries of the South East Asia Region have on the whole a high incidence of death and disease among infants and children. In Afghanistan Burma and Indonesia where registration of deaths is either non-existent or incomplete infant mortality rates are estimated at 450 360 and 300 per 1 000 live births respectively. In India Ceylon and Thailand where there is registration the infant mortality rate has shown a steady



FIG 2 WHO IN SOUTH EAST ASIA—II



Dr. Cicely Williams, Maternal and Child Health Adviser at the South East Asia Regional Office examines a child suffering from pellagra

reduction over the last ten years. For 1948 it is given as 120, 86 and 65, respectively.

The outstanding factor is that even where the infant mortality rate is not by western standards excessive mortality in the 1-4 year age group is relatively very high. For instance, in Ceylon where the infant mortality rate represents 27.6% of the total deaths (compare with 13.5% in Canada) the mortality in the 1-4 year age group is 13.7% (compare with 2.6% in Canada). These figures reflect the tendency to pay but scant attention to the development of paediatrics clinical or social. Whereas there are many well trained obstetricians many of whom have very remunerative private practices, there are very few paediatricians. So called 'health visitors' have,

in many places, had no training in nursing—apart from midwifery—which is another grave handicap to the work. Fortunately some doctors and nutritionists are now becoming interested in nutritional problems in children.

Public health nurses attached to the UNICEF/WHO malaria demonstration teams in South East Asia have done magnificent work under very difficult conditions. They have not only facilitated the antimalaria operations, but they have shown in no uncertain way, what can be accomplished both in preventive and curative medicine and in school health by properly trained health visitors.

At present there are a WHO paediatrician and a WHO public health nurse living in a village, Najafgarh about 14 miles from Delhi. They have been helping to organize a rural training centre for about 60 students from the Delhi College of Nursing and the Lady Reading Health School. There are also a WHO paediatric nurse and a paediatrician working with the staff at the Irwin Hospital, Delhi and helping to teach child care. It is hoped to expand these training programmes to organize postgraduate courses in clinical and social paediatrics for doctors, nurses, and health visitors, and to co-operate with the Government of India Education Department in health education and social work.

A UNICEF/WHO pilot team of one clinical pathologist and obstetrician and a public health nurse has gone to Afghanistan to make a survey of

maternal and child health needs and possibly to expand the existing training facilities for health personnel

Brief surveys have been made in Burma Ceylon Indonesia and Thailand and plans have been made for WHO and UNICEF assistance in maternal and child health activities in these countries

The All India Institute of Hygiene and Public Health in Calcutta has had WHO expert assistance in planning much needed expansion of its maternal and child health training facilities UNICEF is making a substantial contribution in equipment and personnel for this project which is expected to provide an international training centre which will co ordinate the work of paediatricians and obstetricians with that of urban and rural health centres

### Nursing

Further development of training facilities for nurses and effective use of nurses in South East Asia constitute a health problem which is becoming more acute in view of the growing need for nurses and the financial difficulties involved in increasing or even maintaining their present numbers With few exceptions the quality of teaching in the nursing schools does not come up to desired standards and understaffing often destroys the satisfaction nurses normally feel when good work has been accomplished

WHO together with UNICEF will help by providing nursing instructors in selected schools of nursing in all the countries of the region during 1951 These instructors will teach in the lecture rooms hospital wards and clinics and will also give assistance in revising nursing training methods and curricula to suit the needs of each particular country or area Instructors in public health nursing will also be provided for selected training schools Public health nurses attached to UNICEF/WHO field projects are already giving assistance and guidance to health visitors midwives and other health workers

FIG 3 WHO IN SOUTH EAST ASIA — III



WHO public health nurse Miss M. J. Healey demonstrates delisting techniques to students of the Delhi College of Nursing

In Thailand, it is proposed that a WHO nurse consultant be appointed to assist in setting up a nursing division within the Ministry of Health and in making a study of nursing needs for long range planning to make the country self contained in nursing administration and teaching

### Consultant Services

Expert consultants have advised governments in South East Asia in problems relative to malaria, tuberculosis venereal diseases filariasis goitre, typhus, poliomyelitis, hospital dietetics, and medical education. An example of the type of service which these experts have rendered is found in the work of an expert who surveyed the filariasis situation in Ceylon and who was retained by the Government to organize an intensive training course for national health workers and to initiate control measures based on the findings of his survey. Another example is provided by the team of three experts who visited India early in 1949 to advise the Government on the poliomyelitis situation in that country. After conducting a survey and holding orientation courses in the four big towns in India the team submitted a report to the Government outlining plans for rehabilitation and physiotherapy centres and for training the requisite personnel. One of the members of the team remained at the request of the Government to start one such training centre in Bombay.

### Fellowships

In 1949 and 1950 WHO awarded a total of 71 fellowships to the following countries of the South East Asia Region: Afghanistan 3, Burma 3, Ceylon 15, India 31, Thailand, 16 and Portuguese India 3. These fellowships were for periods of study up to 12 months in countries where specialized training is available in public health subjects such as tuberculosis, malaria, venereal diseases, sanitary engineering, nursing, paediatrics and child care and public health administration.

### Provision of Medical Supplies and Teaching Equipment

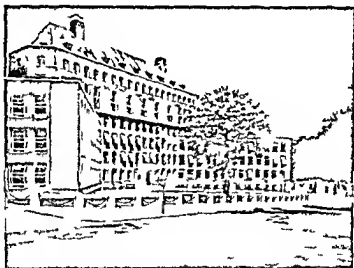
To meet emergency needs in South East Asian countries for medical literature and teaching equipment WHO in 1949 made available a total of \$40 600 distribution being as follows: Afghanistan \$2 500, Burma \$15 000, Ceylon \$2 000, India \$14 100 and Thailand \$7 000. An additional allocation of \$13 600 was made during 1950: Afghanistan \$1 600, Ceylon \$5 500, India \$5 000 and French India \$1 500.

To help supply DDT needed for national malaria control projects WHO assisted three South East Asian Governments in 1950: Afghanistan \$11 000, India \$25 000, Thailand \$16 320.

## RECENT EPIDEMICS AND THE WORLD INFLUENZA CENTRE

A new influenza epidemic invaded Europe during the winter of 1950/1. It probably originated in Sweden where a local outbreak of the disease was observed in June 1950. Other primary foci seem to have existed in Northern Ireland and in the regions of San Sebastian and Bilbao in Spain. The epidemic was first reported in Denmark in November 1950 then in Norway and Sweden. In December Belgium was affected but by 15 January 1951 the epidemic was thought to be over in that country. From Northern Ireland where it was prevalent at the end of 1950 influenza passed on to England and Scotland. In Great Britain the epidemic was the most widespread for fourteen years. The cities of Liverpool and Newcastle in particular became outstanding epidemic foci. At Liverpool there was one week when the mortality attained the highest figure observed

FIG 4 INFLUENZA EPIDEMIC — I



National Institute for Medical Research, Mill Hill, London, where the World Influenza Centre is located

during the 1918/9 epidemic but this time young adults were not the victims in 1950/1 deaths occurred principally in age groups above 55. It should be added that the use of sulfonamides and antibiotics now makes it possible to prevent or cure the pulmonary complications which caused such a high mortality in 1918/9.

In the middle of January two epidemic waves reached France one coming from the north the other from northern Spain.

The epidemic also appeared in Andorra, Finland, western Germany, Gibraltar, Greece, Iceland, Malta, the Netherlands, Switzerland, Turkey and Yugoslavia. Everywhere the disease has been of a mild type.

In the other continents, epidemic outbreaks have been reported from Algeria, Brazil, Israel, Japan, Lebanon, Peru, and the USA, but the extent of these outbreaks will only be known later, when numerical data are available.

The first serological examinations carried out in the national centres and at the World Influenza Centre (WIC) established by WHO in London

FIG 5 INFLUENZA EPIDEMIC—II



Testing for the presence of the Influenza virus A by inoculation of a ferret, one of the few laboratory animals susceptible to the disease

show that the virus responsible for the main 1950-1 epidemic belongs to type A. Certain more precise determinations indicate that the A prime type is the one most frequently involved. It may be recalled that the epidemics of 1946-7 and 1948-9 were also caused by the A prime virus. As is known, the various virus strains taken from patients are sent by the national influenza centres—after a preliminary examination—to the World Centre in London, which determines the types involved so that vaccines may be prepared and an epidemiological study of the disease made on a worldwide scale. The work of the World Influenza Centre started during the 1948-9 epidemic, and the results of the studies made in this connexion have just been published in the *Bulletin of the World Health Organization*.<sup>1</sup>

The authors of this article, Dr C M Chu, Dr C H Andrewes and Mr A W Gledhill of the World Influenza Centre, London, after describing in detail the spread of the epidemic, discuss the various serological methods which have been employed for determining the types of influenza

virus and describe the results of the study of 20 of the 86 strains received during the epidemic. Their conclusions have been summarized as follows.

The 20 strains showed considerable similarity in haemagglutination tests and on examination by electron microscopy. The authors describe the method used for carrying out a haemagglutination inhibition test and discuss in detail the advantages of removing the non specific inhibitor by crude filtrate of cholera vibrio cultures. In analysing the results of this test the authors introduce the idea of an antigenic ratio between strains making it possible to take into account the factor of reactivity or avidity which has already been suggested by other authors.

When compared with old strains according to the methods described the 1948/9 A viruses proved to be of the A prime type. None of them was related to the WS or PR8 strains. Antigenically the viruses of the 1948/9 epidemic constitute a more homogeneous group than those studied until now. They are also so closely related to the strains of the 1946/1947 epidemic that it is difficult to distinguish with any certainty between the two groups. The results of other serological tests contributing to the differentiation of the virus strains—strain specific complement fixation and neutralization in eggs and mice—are included.

Ten strains of virus B isolated during localized epidemics which occurred simultaneously with virus A epidemics were received at the laboratory. For the initial typing the authors used the complement fixation test with antigen prepared from chorio allantoic membrane and type specific human sera. This test gave better results than the haemagglutination inhibition test.

In discussing the results of these experiments the authors mention two views concerning the origin of the epidemic: one that it spread from an initial focus, the other that it was due to the renewed virulence of endemic viruses in different countries. The antigenic homogeneity of the viruses which caused the epidemic in the various regions supports the first hypothesis. It seems likely that the homogeneity revealed by the serological investigation is due partly to the fact that the risks of variation in strains kept in laboratories have been reduced to a minimum in the studies carried out by the WIC. There is no doubt that different antigenic varieties of influenza virus do occur in nature. To estimate the true differences which exist between them an effort must be made to control the factor of laboratory variation. For this purpose freshly isolated viruses in chick embryos should be freeze dried as soon as possible. Investigators engaged in serological research should agree to renew their standard viruses from a common stock as close as possible to the primary strain. The number of passages in eggs should be limited to a minimum and in no case should a virus passed in mice or ferrets be used for antigenic studies.

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## INTERNATIONAL SANITARY REGULATIONS

The draft International Sanitary Regulations, which are to be considered by a special committee of the Fourth World Health Assembly in April 1951, were reaching a final stage of preparation when the Expert Committee on International Epidemiology and Quarantine met for its third session held in Geneva from 9 to 18 October 1950<sup>1</sup>. It was the committee's task to review, and to incorporate in the Regulations in so far as practicable, the comments made by governments and international bodies concerned. Drs M. T. Morgan and M. Gaud, of the Office International d'Hygiène Publique, were appointed to assist the Secretariat and the Legal Subcommittee of the parent committee in preparing the final draft of the Regulations.

The committee decided to limit the scope of the draft Regulations to the pestilential diseases—cholera, plague, relapsing fever, smallpox, typhus fever, and yellow fever—and to state expressly in the preamble that national health administrations could take what measures against other communicable diseases they considered necessary for their protection pending possible adoption by WHO of further international regulations. Special provisions relative to the sanitary control of the Mecca Pilgrimage are to be incorporated in an annex to the basic regulations.

The committee emphasized the need for all countries to adhere to the provisions of the new International Sanitary Regulations once they are in force and requested the Director General to take all appropriate measures

<sup>1</sup> The following took part in this session:

### Members

- Dr R. Dujarric de la Rivière, Sous-Directeur de l'Institut Pasteur, Paris, France
- Dr G. L. Dunnahoo, Medical Director, Chief Division of Foreign Quarantine (US Public Health Service), Washington, D.C., USA (Chairman)
- Dr H. S. Gear, Deputy Chief Health Officer for the Union of South Africa, Cape Town, Union of South Africa
- Professor Ahmed Halawani, Director, Research Institute and Hospital of Tropical Disease, Cairo, Egypt
- Dr J. M. Lentjes, Medical Director, Stoomvaartmaatschappij Nederland, Amsterdam, Netherlands
- Dr M. D. Mackenzie, Principal Medical Officer, Ministry of Health, London, United Kingdom
- Dr G. H. de Paula Souza, Director and Professor, Faculty of Hygiene and Public Health, University of São Paulo, Brazil (Vice-Chairman)
- Dr K. Ch. L. Raja, Director-General of Health Services, New Delhi, India

### Ex officio Member

- Dr M. T. Morgan, Président du Comité permanent de l'Office International d'Hygiène Publique, Port of London Authority, London, United Kingdom

### Representative of the United Nations

- P. de Bellaigue, Division of Transport and Communications, Lake Success, N.Y., USA

### Observers

- ICAO
- R. J. Moulton, Chief, Facilitation Section, International Civil Aviation Organization, Montreal, Canada
- Dr F. de Tavel, Medical Adviser, International Civil Aviation Organization, Montreal, Canada
- OHP
- Dr M. Gaud, Directeur de l'Office International d'Hygiène Publique, Paris, France

### Secretaries

- Dr Y. M. Biraud, Director, Division of Epidemiology, WHO
- Dr G. Stuart, Chief, Sanitary Conventions and Quarantine Section, WHO

### Also present

- M. J. Hoste, Chairman, Legal Subcommittee of the Expert Committee on International Epidemiology and Quarantine

to enable countries not members of the Organization to be informed of the Regulations and invited to conform to them. While recognizing that imposing on countries new obligations regarding international health is the exclusive prerogative of the World Health Assembly the committee considered that the *Executive Board* might usefully define recommended practices methods and procedures for disinsectization deratting etc and establish standards for vaccines and other substances diagnostic procedures and sanitary techniques whose adoption by national health administrations would aid in complying with the *International Sanitary Regulations*.

Problems associated with the changing concept from a defensive to an offensive approach in public health confronted the committee in drafting the Regulations. Some of the quarantine measures imposed by governments are now regarded as of little medical value. While certain restrictions must be maintained it is felt that these should be kept to a minimum and should interfere as little as possible with international traffic and shipping. In other words the medical advantages of quarantine restrictions should be of sufficient value to balance against the disadvantages imposed upon communications commerce traffic and travellers. It is WHO's responsibility to decide what the maximum restrictions should be and to see that national health administrations do not exceed the limits established. Individual States should rely more on measures for increasing resistance to communicable diseases within their borders than on restrictions to prevent the entry of infection particularly since barriers short of absolute cessation of movement are of only limited and relative value in excluding infection from a country.

These are some of the considerations which must be taken into account by the special committee which meets before the Fourth Health Assembly and by the Assembly itself before final adoption of the *International Sanitary Regulations*. The chief difficulty lies in finding a satisfactory constructive answer to these critical arguments complete acceptance of which might mean abandonment of most quarantine restrictions now in force. International health regulations must follow the trend of all international legislation and practice towards reducing arbitrary action against international traffic and at the same time must afford adequate protection to countries against importation of the pestilential diseases. The Fourth World Health Assembly will decide whether or not the new *International Sanitary Regulations* meet these requirements.

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smaller dosage of streptomycin and drug resistance appeared to develop more slowly during combined therapy. Associated treatment with *p* aminosalicylic acid (PAS) was effective in over 100 cases. The PAS was given orally (as sodium salt 0.30 g per kg per day in 3 doses) by intravenous drip (0.50-0.75 g per kg per day in terms of free acid for 1.5 months) or intrathecally (as sodium salt in doses of 50-100 mg for lumbar, 50 mg for cisternal and ventricular and 150-200 mg for subdural routes). Symptoms of intolerance were observed in 5% of cases receiving promixin but only rarely in those receiving PAS.

Local therapy was based on a systematic study of the process of upward diffusion of streptomycin after lumbar puncture. An index of diffusion (ID) defined as

$$\frac{\text{units of streptomycin per ml of cisternal fluid}}{\text{units of streptomycin per ml of spinal fluid}}$$

was determined in each patient every 15-20 days. When the protein level in the spinal was much higher than in the cisternal fluid the ID was usually below 0.5. Routes of injection indicated by ID values were: below 0.2 suboccipital; 0.2-0.5 one lumbar after each two cisternal; 0.5-0.75 alternate lumbar and cisternal; over 0.75 lumbar only. Subdural therapy was used in serious cases of tentorial block, sometimes in conjunction with ventricular drainage.

General treatment included administration of large doses of vitamins, blood transfusions and administration of barbiturates and pentothal where necessary.

Treatment was continued until the fluid became normal, which was generally after 6-7 months and was prolonged for the last two groups of patients 1-3 months beyond the normalization of cerebrospinal fluid. Increase in intensity of the Mantoux reaction, usually accompanied by a return to normal of the sedimentation rate, often preceded attainment of fluid normality. Intolerance of intrathecal treatment was interpreted as an indication of a change of route of administration, a reduction in dosage or the use of a new batch of streptomycin, but never a suspension of the therapy. Especially in the first months of treatment a suspension of the therapy is always considered as dangerous.

A study of the alterations in the composition of cerebrospinal fluid gave valuable indications for therapy. A reduction of the glucose level in the cerebrospinal fluid to below 0.4 g per 1000 ml frequently permitted early diagnosis of tuberculous meningitis. Protein levels in spinal and cisternal fluids determined the route of injection: protein levels of over 2.0-3.0 g per 1000 ml in the cisternal fluid were taken as indications for ventricular injection and so were ocular signs, hypertension and comatose condition, regardless of protein levels.

# TREATMENT OF TUBERCULOUS MENINGITIS

## Three Years' Experience

Professor C. Cocchi, Director, Department of Paediatrics University of Florence, has carried out some pioneer work in the treatment of tuberculous meningitis with streptomycin. In December 1946, by which date the first tests had already revealed the high toxicity of this antibiotic, he began experimental and clinical research with the object of reducing the toxic effects of the new drug by limitation of the dosage. The harmful effects seemed to him doubly dangerous: on the one hand, streptomycin might affect the nervous system and on the other it appeared to inhibit certain biological processes related to the immunization of the human organism.

By combining intrathecal and intramuscular injections he obtained excellent results with doses of the antibiotic five or ten times lower than those which had generally been administered. In addition he experimented with associated therapy: streptomycin promin or streptomycin *p*-aminosalicylic acid, the effects of which were extremely satisfactory.

The efforts made during three years of research and clinical experience, together with the results obtained from the new therapeutic techniques as applied in the Ospedale Meyer Florence have been described by Professor Cocchi and Dr. G. Pasquinucci in the *Bulletin of the World Health Organization*<sup>1</sup>.

The following summary gives the essential points of this study.

From December 1946 to December 1949 a total of 385 cases of bacteriologically confirmed tuberculous meningitis were treated in Florence, 359 of these cases were treated in the Ospedale Meyer and the remainder in the Casa di Cura del Bambino. From the outset special attention was paid to limiting the dosage of streptomycin, whether administered intramuscularly or intrathecally. It was found that by giving small intrathecal injections in conjunction with intramuscular application it was possible to obtain cures without increasing the intramuscular dosage and thus to avoid the toxic and generally deleterious effects of large doses of the antibiotic.

The daily intramuscular dosage in mg per kg of body weight, given in two injections, was approximately 10 mg for adults, 20 mg for children over 2 years and 30 mg for children under 2. The corresponding daily intrathecal doses were 1 mg, 2 mg and 3 mg respectively. In 1949 the intrathecal injections were given twice daily for the first month, once daily for the second and third months and then once every other day until normality of cerebrospinal fluid was reached.

An associated dosage of 0.10 g per kg of body weight per day of a 60% solution of promin in one or two intravenous injections permitted

<sup>1</sup> B. H. World Health Org. 1950 3: 15

that some of them had started digging gardens in the grounds of the hospital. He recommended that a social worker be appointed to sustain this effort and to find other forms of useful activity for patients able to participate in them.

### Japan Seeks WHO Membership

An application for full membership in WHO has been received from Japan. A letter from Shigeru Yoshida, Minister for Foreign Affairs, dated 6 February 1951, indicates the Japanese Government's willingness to abide by the principles of the WHO Constitution and to fulfil all required obligations.

Action on admitting Japan to the Organization will be taken at the Fourth World Health Assembly which is to open in Geneva on 7 May. According to the Constitution States which do not belong to the United Nations can be admitted to WHO by simple majority vote of the Health Assembly.

To date 74 countries have joined WHO as full Members and one, Southern Rhodesia, as an Associate Member.

### WHO Plans Expanded Fellowship Programme

Fellows from the Eastern Mediterranean Region will number 74 according to WHO plans for 1951. These represent an allocation of \$130 000, which amount will be increased to \$150 000 for new fellowships in 1952. In South East Asia it is proposed to grant 161 fellowships of a total value of \$329 000 during 1951 and 1952.

WHO fellowships are given to candidates approved by the national governments of the region concerned. They are awarded for study for periods up to 12 months on subjects such as tuberculosis, malaria, venereal diseases, nursing, paediatrics, public health administration, etc. In a few countries such as Ethiopia, long term programmes of basic medical education are undertaken. 17 fellowships for undergraduate studies in medicine will be granted to that country in 1951. In addition to its own regular fellowship programme, WHO will administer fellowships awarded by the United Nations Technical Assistance Board and by UNICEF.

### Leon Bernard Foundation Award

Professeur R. Sand of Belgium has been nominated by a committee of the World Health Organization to receive the Léon Bernard Foundation Prize. This award, consisting of a medal and a sum of 1 000 Swiss francs, is given for practical achievement in social medicine in accordance with the provisions of an international subscription raised in memory of Professeur Leon Bernard of France, a member of the Health Committee of the League of Nations. It was last awarded in 1939.

Professeur Sand, a pioneer philosopher, historian and teacher of social medicine, holds the chair of social medicine at the University of Brussels. The Léon Bernard award will be presented to him at the Fourth World Health Assembly.

### Third Award of Darling Foundation Prize

For the first time since 1938, the Darling Foundation Prize, an award established by the League of Nations in honour of the malarialogist S. T. Darling, has been presented. Recipients are two British scientists, Professor H. E. Shortt and Dr P. C. C. Garnham, whose work on the life-cycle of the malaria parasite in man and monkey led the WHO Expert Committee on Malaria to nominate them for this honour. Professor Shortt, who is an authority on tropical medicine, occupies the chair of Medical Protozoology at the University of London and is President of the Royal Society of Tropical Medicine.

Of 129 strains of tubercle bacilli isolated from cerebrospinal fluid 38 were resistant to 5  $\gamma$  per ml, or more, of streptomycin. There was an evident relation between streptomycin resistance and mortality, and between appearance of resistance and duration of therapy. It was found that patients who had relapses and from whom streptomycin resistant organisms were isolated responded well to treatment with PAS and streptomycin. Of 38 patients with bacilli resistant to 2  $\gamma$  per ml, or more, 23 were given PAS and streptomycin. 13 of these are alive whereas the 15 patients not treated with PAS all died.

Of the 267 patients who were admitted between December 1946 and June 1949, and received treatment at the Ospedale Meyer only, 147 have survived and 129 have normal cerebrospinal fluid. The general condition of all the cured patients is very good. In only 14 of them have sequelae persisted, 4 have slight hemiparesis, 1 has slight facial paresis, 1 has paraparesis, 3 are slightly deaf, and 5 show defective psychomotor development.

Techniques for microscopic demonstration of tubercle bacilli in cerebrospinal fluid, and for catheterization and controlled pressure drainage are described in annexes.

## Notes and News

### Leprosy Consultants in Ceylon and Ethiopia

The latest methods in leprosy therapy are being demonstrated in Ceylon and Ethiopia by WHO consultants. Dr R. G. Cochrane, Director of Leprosy Research at the Chingleput Sanatorium, South India, has gone to Ceylon where he will work in leprosy hospitals and demonstrate recent advances in bacteriology and pathology relating to leprosy at the Medical Research Institute. Dr Cochrane will in his own words aim "to stimulate the medical profession and others to a deep realization that nowadays leprosy need no longer be regarded as a curse sent upon man which has forever to be endured". He believes that there are now possibilities in both therapy and prevention which may make the conquest of leprosy a reality.

In Ethiopia, about 700 leprosy patients will be given Sulphetrone<sup>1</sup> treatment for a year as a result of the visit of WHO consultant Dr M. A. K. Dalgamouni, Director of the Leprosy Control Section of the Egyptian Ministry of Health. In addition to visiting leprosaria where he demonstrated the use of the new drug, Dr Dalgamouni made a survey of secondary school pupils to try to discover fresh cases.

In the visits of both the WHO consultants, attention is called to the importance of rehabilitation measures for those handicapped by leprosy. For example, when Dr Dalgamouni returned to the leprosarium at Akaki a week after he had told patients that treatment would be more effective if they kept themselves usefully occupied, he found

<sup>1</sup> Sulphetrone is a proprietary name. Its chemical formula is given as tetrasodium 4,4'-bis-( $\gamma$ -phenyl-propylamino)-d-phenylsulfone- $\alpha$ ,  $\gamma$ ,  $\alpha$ ,  $\gamma'$ -tetrasulfonate. The mention of manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature which are not mentioned.

WHO Eastern Mediterranean Region and Drs J McDougall and D Thomson from WHO Headquarters—Dr E Berthet WHO Tuberculosis Consultant and Head of the Istanbul Centre gave a progress report on the work accomplished in Turkey in the last year. Three hundred doctors and other medical personnel have been given training courses in tuberculosis control. 10 000 radiological and 8 000 tuberculin tests have been made and 3 000 non infected persons have been vaccinated.

### Public Health Consultant Sent to Egypt

Dr S F Farnsworth Public Health Officer of the City of Oakland California has been appointed as a WHO public health consultant. He has undertaken a three month assignment to aid the Government of Egypt in setting up a health demonstration area in the district of Qalyub north of Cairo.

### WHO Nursing Consultant Visits South East Asia

During a recent mission to Asia Miss Olive Baggallay WHO Nursing Consultant at Geneva Headquarters visited some of the WHO field teams in Borneo Burma India Malaya and Thailand.

Joint WHO/UNICEF projects in these countries are assisting in the training of nurses and midwives and in the development of teaching facilities in hospital and public health services. Main emphasis is being placed on the preparation of maternal and child health workers to strengthen programmes in this field.

In Penang a well-established school of nursing is being expanded to receive student nurses for part of their training from the small hospitals in the Federal States. The school is being assisted with equipment and with three nurse instructors who are separately engaged in classroom teaching clinical midwifery and public health.

Miss Baggallay was accompanied on her visits by the WHO nursing advisers of the region concerned and opportunity was taken to consult with the government authorities concerning plans for the development of their nursing services.

### Dietetics Consultant Completes Indian Mission

Miss E Stephenson WHO Dietetics Consultant has completed a four and a half month assignment in Calcutta where she helped to establish a special diet kitchen in the Calcutta Medical College Hospital and gave advice on the setting up of a dietetics course at the All India Institute of Hygiene and Public Health. The hospital kitchen has now been completed and an ex army cook appointed to take charge. In organizing the dietetics course at the All India Institute Miss Stephenson emphasized teaching practical cookery to students.

### Thailand Yaws Control Project

In villages and towns of Rajburi Province Thailand Buddhist temples are being utilized for both clinics and living accommodation by WHO itinerant teams which are launching large scale yaws control operations. According to Dr D R Huggins senior adviser with the teams these temples serve this purpose well particularly since they are situated next to the village schools which facilitates examining schoolchildren. It is estimated that four fifths of those suffering from the infective stage of yaws are persons under 18 years and women of child bearing age.

Penicillin equipment and international personnel for this project are being provided by UNICEF. In six months of activity penicillin treatment administered by the teams has arrested the infective stage of the disease in more than 11 000 cases. Two injections

and Hygiene Dr Garnham who spent many years in Africa in the British Colonial Service where he became widely known for his studies in tropical medicine and the epidemiology of malaria is Reader in Medical Parasitology at the University of London.

The Darling Foundation Prize which consists of a bronze medal and a sum of 1 000 Swiss francs is now administered by WHO Following approval by the Executive Board the award was presented to Professor Shortt and Dr Garnham at a meeting of the Royal Society of Tropical Medicine and Hygiene in London by Sir Gordon Covell member of the Darling Foundation Committee and Chairman of the WHO Expert Committee on Malaria at its fourth session

## Executive Board Approves Action on Yellow Fever Epidemiological Questions

The Executive Board at its recent session gave its approval to the inclusion of Tanganyika Territory in the African endemic yellow fever area<sup>2</sup> This decision was reached on the basis of a request made by the Government of the United Kingdom and approved by the Government of Tanganyika following recent investigations on the distribution of immunity to yellow fever in East Africa

In another resolution concerning yellow fever the Board approved the Stanleyville Laboratory Belgian Congo for the carrying-out of seroprotection tests required for the international certification of immunity against yellow fever

## Bilharziasis Survey Reveals Infected Areas

The bilharziasis survey being conducted in the Middle East by Dr M Abdel Azim Bey<sup>3</sup> has revealed infected areas in Saudi Arabia Syria and Iraq The investigation in Saudi Arabia began in a village from which Arab oil workers who were reported to be infected had come In examining schoolchildren from this village Dr Azim found 22 out of 25 between the ages of seven and twelve infected with bilharziasis The source of the disease was discovered to be snail infested water channels used for irrigation purposes Dr Azim believes that it should be relatively easy to clear up this infestation with copper sulfate In the Riad area in east-central Saudi Arabia vector snails were found in rainwater pools used as a general source of water and for bathing Incidence of the disease among schoolchildren there reached 60% in some cases

In Iraq control measures will be more difficult because the source of infection is snail infested lakes In certain areas in Syria where sluggish rivers provided a habitat for the snails incidence of bilharziasis was revealed to be 60-70%

The results of Dr Azim's investigation together with recommendations for control measures will be communicated to the countries concerned by the WHO Regional Office for the Eastern Mediterranean

## Istanbul Tuberculosis Centre Opens

The WHO Tuberculosis Control Demonstration and Training Centre at Istanbul<sup>4</sup> will now be housed in a new \$130 000 building which was officially opened in February The new building contains a laboratory a dispensary a radiological department a vaccination department and a section for social services and administration

At the opening ceremonies—attended by the Governor of Istanbul Dr E H Ustun dagh Minister of Health of Turkey diplomatic representatives of the countries of the

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fellowships Both will go to America in August to study at the Johns Hopkins School of Hygiene and Public Health Baltimore Md where they will specialize in venereal diseases

### New Headquarters for PASB

The Pan American Sanitary Bureau (PASB) WHO Regional Office for the Americas has purchased for its headquarters the Hitt House 1501 New Hampshire Avenue N W on Dupont Circle Washington together with the adjoining Blodgett House at 1515 New Hampshire Avenue Purchase of the properties was facilitated by the W K Kellogg Foundation and the Rockefeller Foundation which advanced funds for a number of years on a reimbursable basis

### Antityphus Campaign in Peru

An intense campaign to reduce the incidence of typhus has been launched by the Peruvian National Health Department with the technical assistance of the Pan American Sanitary Bureau WHO Regional Office for the Americas and with supplies and equipment provided by UNICEF Operations began in the area surrounding the city of Cuzco ancient capital of the Incas which suffered a devastating earthquake in May 1950 From the start of the campaign on 16 October 1950 to 31 December 64 213 persons and 23 568 dwellings were treated with DDT It is planned to extend the control programme to other areas in the province of Cuzco and eventually to include the entire country of Peru

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## Views on WHO

### Third World Health Assembly

In a report on the Third World Health Assembly published in the *Journal of the American Medical Association* Chicago (1950 144 451) Dr Edward J Mc Cormick writes

In these troubled times of disturbed economics and political unrest (and susceptibility of lesser nations to adopt undemocratic ideologies) it is becoming apparent that improvement in health is a *sine qua non* in improving understanding among nations

I think it will be found that the WHO will play a far reaching part in the United Nations program of technical assistance for underdeveloped areas In many areas economic progress is impossible without substantial improvement in public health

Diseases such as malaria tuberculosis and syphilis take a huge toll in incapacitation and lack of production From the experience of the past few years it is clear that control campaigns are technically feasible and can be conducted at a relatively low cost DDT and penicillin are key weapons in combating tropical debilitating diseases such as malaria and yaws When these weapons are used in a planned attack the mroads of disease on populations of wide areas are greatly reduced

It has been shown that the general improvement in health results in an increase in the productivity of the people It is expected that in several of these campaigns WHO will collaborate closely with the United Nations Food and Agricultural Organization I was greatly impressed by my observations at the Third



only have been found sufficient to clear up the symptoms of the disease which is estimated to affect some 200 000 people in Thailand

On 1 April 1951 the international staff will begin to train an additional 83 sanitary inspectors and 15 medical officers so that the control operations may be progressively extended to other areas of Thailand

### Indonesian Antiyaws Campaign

Dr C M Hasselman WHO senior adviser in the antiyaws campaign which was launched in Indonesia last summer<sup>a</sup> has reported that more than 83 000 injections of penicillin had been given to yaws sufferers by the end of January 1951. Treatment was given to all infectious cases discovered in examination of 320 000 persons

Dr Hasselman has replaced Dr K R Hill who left the demonstration team in September 1950

### Typhus Control in Afghanistan

WHO procured for the Afghan Government on a reimbursable basis, 20 000 ml of antityphus vaccine sent to Afghanistan by air from New York in early February. The vaccine will be used to aid in the WHO assisted campaign<sup>a</sup> against annually recurring typhus outbreaks—in Kabul the capital and in Kandahar in the southern part of the country in particular. DDT spraying is another important aspect of the campaign, and Dr S L Dhir (India) who is in charge of the Kandahar operations has reported that 11 000 women were treated by five squads during the first month

### Tuberculosis Centres in India

Six workers recruited by WHO for the UNICEF assisted tuberculosis demonstration and training centres which are being established in Delhi and Trivandrum have arrived in India—Dr G Hertzberg (Norway) formerly tuberculosis expert with the Oslo Public Health Service. Miss A Gerhardsen (Norway) previously teacher of nursing at the Public Health Teaching Centre of Oslo. Miss M Hudson (Canada) previously chief nurse at the Tuberculosis Rehabilitation Centre for Refugees in Germany. Dr E Nassau (Great Britain) pathologist since 1939 at the Harefield Hospital Middlesex England. Dr A Nelson (Sweden) formerly Medical Director of the Mass Radiography Section of the Swedish Royal Medical Board and Mr K W Noschis (Finland) formerly x ray adviser at the Optical Department of the Royal Technical Institute at Stockholm. Dr Hertzberg and Miss Gerhardsen have been assigned to the Trivandrum centre. Miss Hudson will go to Delhi. Drs Nassau and Nelson and Mr Noschis will have their headquarters in Delhi but will also visit the other centres in India to give advice in their specialities

The Delhi and Trivandrum centres are the first of six which are planned for the South East Asia Region with UNICEF and WHO assistance. Others will be located in Patna (India) Colombo (Ceylon) Rangoon (Burma) and Bangkok (Thailand)<sup>a</sup>

### Ceylon Fellows To Study in America

Dr D A Jayasinghe District Medical Assistant of Kegalla Ceylon and Dr (Mrs) I Jayawardene of the De Soysa Maternity Hospital Colombo have been granted WHO

<sup>a</sup> Chron. W o l d Hlth Org 1950 4 193

See page 47

<sup>a</sup> Chron. W o l d Hlth Org 1950 4 154



# CHRONICLE OF THE WORLD HEALTH ORGANIZATION

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**World Health Assembly** The World Health Organization is engaged in a gigantic task. It is concerned with raising standards of medical education, fortifying national health services, assisting in control campaigns against infectious diseases and codifying and classifying medical information of international importance. The WHO works closely with the World Medical Association on technical problems. It works with governments in raising health standards in member countries. It is assisted and supported by a number of international organizations dealing with special problems of health. The WHO is meeting a real need in this shrinking world in fulfilling the obligations of an international public health agency.

#### Food and Population

An editorial which appeared in the *American Journal of Public Health* Albany (1950: 40: 1008) comments on the importance of public health work as part of a general programme to raise the standards of living in the underdeveloped areas.

In a broad sense the objectives of the FAO and the WHO are parallel and mutually advantageous. From a narrower and more immediate view, however, there is an apparent conflict. The prosperity and satisfaction of a given people at a given time depends on a balance between its resources and its population and the basic problem of the underdeveloped areas is that they do not produce food enough to keep their people alive. Furthermore

there are evidences that the balance has been moving in the wrong direction in recent years. A report made at the meeting of the Milbank Memorial Fund last winter showed that during the decade 1938-1948 the world population increased by about 8.3 per cent while its aggregate supplies of calories, total protein, vegetable protein, animal protein, and milk protein increased by figures ranging from 0.7 per cent to 6.4 per cent.

It is not unnatural under these circumstances that population experts should raise the question whether public health programs in the underdeveloped areas may do more harm than good by saving children from dysentery and young men from tuberculosis only to have them perish by malnutrition. The implied conclusion is that we should soft pedal on WHO and go actively forward with FAO.

This is a challenge which cannot be lightly dismissed, and it has on its side the emotional reaction to which the timid are so prone, which always fears the new path and clings to the old one. On the whole, however, it does not seem to us that such fears are justified. Modern public health does not prevent death alone. It also prevents disease. For every life preserved by a tuberculosis program, scores of individuals are saved from invalidism. For every life saved from malaria, hundreds of individuals are maintained as active producers in the population. In Greece, for example, malaria control in certain areas has vastly increased crop production.

## WHO IN THE EASTERN MEDITERRANEAN REGION

WHO's Eastern Mediterranean Region comprises countries in two continents—Africa and Asia—with the exception of Turkey part of whose territory is in Europe. These countries though presenting wide diversity in many respects possess a certain homogeneity with regard to health conditions. Countries in Africa which are included in the region are the Anglo Egyptian Sudan, Egypt, Eritrea, Ethiopia, Libya, Somalia and British and French Somaliland. In Asia there are Aden, Cyprus, the Hashemite Kingdom of the Jordan, Iran, Iraq, Lebanon, Pakistan, Saudi Arabia, Syria and Turkey.

Of the 182 million inhabitants of the region 46 million belong to Africa and 136 million to Asia. Pakistan which is not geographically speaking a proper Eastern Mediterranean Country has 73 million inhabitants. Population problems in the region are conditioned mainly by two factors: (1) an unusually high birth rate and (2) a minimum of fertile land to meet the needs of the people. The area is largely rural, 90% of the inhabitants depending on agriculture which centres about a few rivers and scarce ground water. This gives rise to an incredible density of population in some countries with consequent effects on health conditions. In Egypt for example the density of population is 550 per km<sup>2</sup> increasing in some areas of the delta to 2 000.

### Regional Organization and Health Policies

WHO's activities in the Eastern Mediterranean Region began with the Eastern Mediterranean Conference held in Cairo in February 1949<sup>1</sup>. The Regional Office was established in July of the same year at Alexandria under the direction of Sir Aly Shousba Pasha. A second meeting of the Conference which had by then become the Regional Committee for the Eastern Mediterranean was held in Geneva in October 1949<sup>2</sup>; the most recent session took place in Istanbul in September 1950<sup>3</sup>.

Much of the work of these first two years has been of an exploratory nature as was essential and a very important quantity of information, documentary and otherwise, has been accumulated. With the exception of Somalia every part of the region has been visited—many countries on more than one occasion—for lengths of time varying from a few days to a month. The importance of establishing personal relations between the countries of the region and the regional office by means of direct contact cannot be overrated and in fact can well count as the first major project undertaken.

Ch. W. *Id. Hlth. Org.* 1949 3 48

Cl. W. *Id. Hlth. Org.* 1949 3 75

Ch. W. *Id. Hlth. Org.* 1950 4 374

## RECENT AND FORTHCOMING MEETINGS

### 1950

- 2 9 November WHO Expert Committee on International Epidemiology and Quarantine Legal Subcommittee third session Geneva
- 6 7 November WHO Expert Committee on the Unification of Pharmacopoeias Subcommittee on Non Proprietary Names first session Geneva
- 6 11 November WHO Expert Committee on Biological Standardization fourth session Geneva
- 6 13 November FAO/WHO Expert Panel on Brucellosis first session Washington
- 27 November Commission for Technical Co-operation in Africa WHO Malana
- 9 December Conference in Equatorial Africa Kampala Uganda
- 11 12 December Preparatory Working Group on a Public Health Administration Seminar Geneva
- 11 16 December WHO Expert Committee on Malaria fourth session Kampala Uganda
- 11 16 December WHO Expert Committee on Mental Health Subcommittee on Alcoholism first session Geneva
- 11 16 December Joint WHO/FAO Expert Group on Zoonoses first session Geneva

### 1951

- 8 30 January WHO Executive Board Standing Committee on Administration and Finance Geneva
- 22 January WHO Executive Board seventh session Geneva
- 5 February
- 30 January Léon Bernard Foundation Committee Geneva
- 9 April 5 May WHO Special Committee to consider the Draft International Sanitary Regulations prepared by the Expert Committee on International Epidemiology and Quarantine Geneva
- 10-17 April Joint FAO/WHO Expert Committee on Nutrition second session Rome
- 19 28 April WHO Expert Committee on the Unification of Pharmacopoeias eighth session, Geneva
- 30 April 1 May WHO Expert Committee on the Unification of Pharmacopoeias Subcommittee on Non Proprietary Names second session
- May WHO Expert Committee on International Epidemiology and Quarantine Legal Subcommittee fourth session Geneva
- 7 May Fourth World Health Assembly Geneva
- 28 30 May WHO Consultative Committee for Europe first session Geneva
- 31 May Joint Committee on Health Policy UNICEF/WHO fifth session Geneva
- 4-16 June WHO Executive Board eighth session Geneva

examples of this are the notions now being seriously questioned that (1) the public health of a country can be entrusted to persons who because of their meagre salaries must also work privately in order to live decently and (2) public health work does not require special training and experience. The latter notion has been forced upon certain countries by circumstances but is gradually being changed.

WHO has devoted much effort to exposing and attacking such misconceptions in public health service wherever they have been found. WHO and its Eastern Mediterranean Regional Office have made considerable progress in establishing the principle that the health of the peoples of the region is not just a national affair but is closely interwoven with the health of those in other countries of the region and consequently with the health of peoples all over the world. It is beginning to be understood that steady improvement of the people's health has a direct relationship with similar evolutionary processes throughout the world. An example of the co-operative spirit within the region was given at the second meeting of the regional committee when after assessing local resources in terms of scientific institutes, medical and nursing schools, laboratories and hospitals, the various countries limited with their neighbours.

Pakistan offered to share their facilities, however. Pakistan offered its Malaria Institute at Karachi to train malariologists. Turkey its nursing schools. Egypt its laboratories and vaccine producing facilities. Israel a research station for malaria problems. Lebanon its medical schools etc. To allow full use of the experience and facilities available in the region and to broaden the experience of local medical personnel negotiations were undertaken to permit a wide intra regional exchange of doctors, scientists and other specialists. WHO gave additional aid by granting fellowships for study in countries both within and outside the region.

FIG 2 EASTERN MEDITERRANEAN REGION II



Water supply has been one of the chief problems in the refugee camps in the Eastern Mediterranean Region. Here is one of the more primitive arrangements: a shallow water hole dug on a beach some 30 or 40 feet from the sea.

Preliminary surveys have revealed certain facts about the Eastern Mediterranean Region. The first is that there is in this region a great appreciation of better national health as an asset of considerable importance from the economic standpoint which makes governments tend more and more to assume responsibility for both the preventive and curative aspects of the health of their people. This is in contrast to the practices of certain western countries but it obtains as an almost universal principle in the Eastern Mediterranean Region.

However, there is in the region very little in the way of tradition, beyond the universal principle of charity, to guide governments in their health

FIG 1 EASTERN MEDITERRANEAN REGION I



A syphilitic pregnant woman receives penicillin treatment as part of a WHO anti venereal disease campaign

policies. Independence and responsibility are relatively new phases in the history of many of the countries which have had to create philosophies for themselves in their adaptation to modern concepts of progress. This in itself may not be a disadvantage since it gives them an opportunity to adopt the best the world can offer without having to demolish too many time honoured practices and institutions. On the other hand customs and practices which have been inherited from earlier forms of government and administration and which are not always in the best interests of the country, are sometimes exceedingly difficult to replace. Two striking

complete data on its prevalence are not available. Malaria is one of the most serious health problems of the region particularly because of its relation to the agricultural economy.

### Regional Activities

Field work in the Eastern Mediterranean Region has been undertaken or is about to be initiated in several countries: malaria control in Iran<sup>4</sup> and Pakistan<sup>5</sup>; tuberculosis control in Egypt<sup>6</sup>, Pakistan<sup>7</sup> and Turkey<sup>8</sup>; and treponematoses control in Egypt and Iraq<sup>9</sup>.

Studies by experts have been made on a number of health problems in various countries:

<i>Subject in title</i>	<i>Number of titles</i>
Public health administration	11
Tuberculosis	5
Venereal diseases	2
Maternal and child health	3
Nutrition	2
Malaria	6
Miscellaneous	12

A fellowship programme has been developed with emphasis on public health administration and environmental sanitation. By the end of 1950 32 out of an allotted 78 fellowships had been awarded and arrangements were being made for 21 additional ones. Of those already granted six were in public health administration and four in sanitary engineering. Ethiopia, which has neither medical nor nursing schools, was awarded four long term fellowships for basic medical studies and six for nursing training.

The Regional Office for the Eastern Mediterranean maintains an epidemiological intelligence service inherited from the Pan Arab Sanitary Bureau. It has instituted a public information service which broadcasts and issues press releases and publications in English, French and Arabic.

### Co-operation with Other Agencies

Co-operation with other international agencies assumes great importance in WHO's Eastern Mediterranean activities and will probably increase under the United Nations Technical Assistance Programme. With FAO a nutrition training course has been conducted in Cairo and plans are being made for a rural health programme in Lebanon and for a project to increase

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Ch on	W	Id	Hth	O	g	1949	3	135	1950	4	153	193	1951	5	6
Ch o	W	Id	Hth	O	g	1950	4	192							
Ch	W	Id	Hth	O	g	1950	4	153							
Ch o	W	Id	Hth	O	g	1950	4	63	154	1951	5	60			
Ch o	W	Id	Hth	O	g	1950	4	354							



It is recognized throughout the region that the amelioration of the health of the various peoples can best be accomplished by means of a regional health policy, and that the WHO Regional Office is the agency for co ordinating national aspects of such a policy

### Health Conditions

Through the media of surveys and reports, the health needs of the region have been determined. In the Middle East, environmental factors are responsible for many of the major public health problems. The

FIG 3 EASTERN MEDITERRANEAN REGION III



In contrast to the water supply system shown in fig 2 is this pipe line system which was installed with the help of WHO sanitary engineers. The spring operated taps are considered fun to work and were necessary because of the refugees' unfamiliarity with the normal turning tap which they left running thereby wasting much of the precious water.

climate together with periodic floods, contributes to the maintenance and multiplication of insect vectors of disease, lack of the most fundamental sanitation encourages cholera, amoebiasis, salmonellosis, enteric fevers, and various parasitic diseases, artificial water sources—canals, irrigation ditches, unprotected wells etc—provide breeding places for the vectors of bilharziasis and other diseases. Social and economic conditions favour the development and transmission of infectious diseases such as tuberculosis, bejel, smallpox, and cerebrospinal meningitis. Among the endemic diseases with which the WHO programme for the Eastern Mediterranean is most concerned are trachoma, bilharziasis, leishmaniasis and malaria. Trachoma is especially prevalent in Egypt, Iran, Pakistan, and Turkey. In Egypt for example the number of cases of

trachoma in patients attending the ophthalmic hospitals ranges from 79% to 89% and the annual percentage of active infective stages among poor people varies between 30% and 73%. Bilharziasis is believed to afflict about 50% of the total population of Egypt; its incidence is also significant in Iraq, certain areas of Israel, and Syria. Leishmaniasis is a very common disease in some countries of the region but reliable and

(2) initiate the establishment of diagnostic and treatment centres in the principal river ports which do not as yet possess dispensaries or specialized consultation services

(3) participate in the application of principles approved by the World Health Assembly to assure the functioning of venereal disease services. These services will include in particular (a) free medical examination treatment and hospitalization when necessary for foreigners as well as nationals (b) distribution to patients of an individual treatment record card free of charge (c) international tracing of infectious contacts through exchange of epidemiological information by direct communication between the medical authorities concerned where appropriate (d) development or creation of social services preferably specialized so that epidemiological action can be taken and social assistance be given to patients (e) distribution of an international booklet listing treatment centres their addresses and their consultation hours

The Commission will meet once a year and a full report on its activities will be submitted to the Executive Board annually. Two secretariats are to be established: an administrative office at Strasbourg and a medico-social centre at Rotterdam.

This is the first inter-governmental commission of its kind to be established by WHO and it may serve as a model for similar inter-governmental groups—in particular for an anti-venereal disease commission which is being considered by the countries bordering the Baltic Sea.<sup>2</sup>

See also by T. P. K. on concern of the WHO in the team of Finland to be published  
forthcoming in the Bulletin of the WHO

## NEW INTERNATIONAL STANDARDS

New methods of treatment using hormones, antibiotics, enzymes and vaccines have made great strides throughout the world. A large number of substances, biological in origin, which cannot yet be defined by their physical or chemical properties alone are now in everyday use. It is urgent that international standards or reference preparations be established with respect to which the potency of the drugs in question, prepared in different countries, can be determined.

These drugs include adrenocorticotrophic hormone (ACTH), several antibiotics, a number of substances which will appear in volume II of the *Pharmacopoea Internationalis* and preparations such as cardiolipin and lecithin, used as an antigen in the serodiagnosis of syphilis.

In *World Health Organization Technical Report Series No. 36* several new standards are defined by the Expert Committee on Biological Standard

food production and to improve standards of health in Syria UNICEF has been or will be, a partner in numerous campaigns relative to maternal and child health venereal diseases and tuberculosis, it has also contributed much to the fellowship programme A joint project with UNESCO on fundamental and health education is envisaged under the Technical Assistance Programme

An outstanding example of international co operation in the region has been in the relief activities to aid the Arab refugees from Palestine Since early in 1949 WHO has had a part in this programme<sup>10</sup> The Regional Office has supplied medical (2) engineering (11), and health education (1) staff for these activities WHO personnel have worked side by side with UNICEF, the United Nations Relief for Palestine Refugees (UNRPR) its successor—the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWAPRNE) and various agencies such as the American Red Cross the American Friends Service Committee the League of Red Cross Societies, and the International Tuberculosis Campaign These and other groups with financial assistance from various governments as well as international and philanthropic agencies have pooled their efforts to improve the health nutrition and sanitation conditions in the refugee camps in the Near East and their achievements have proved the efficacy of international co operation

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*Chron World Hlth Org* 1949 3 1 67 1951 5 27

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## ANTI-VENEREAL-DISEASE COMMISSION FOR RHINE RIVER AREA

The International Anti Venereal Disease Commission of the Rhine the establishment of which has been under consideration for some time<sup>1</sup> became a reality when the Executive Board at its seventh session passed a resolution authorizing its creation The Commission acting within the framework of WHO policies and in accordance with the terms of the Brussels Agreement of 1924 will with the consent of the governments concerned

(1) initiate the co ordination of anti venereal disease services in Belgium France Germany the Netherlands and Switzerland with a view to strengthening the fight against venereal disease among Rhine River boatmen

## Standards and Reference Preparations under Study

The committee authorized the National Institute for Medical Research London and the Statens Seruminstitut Copenhagen to carry out the following work on substances within their respective fields

*Vitamin B<sub>12</sub>* Determine the properties of the vitamin B<sub>12</sub> preparation intended for use as a standard preparation

*Dihydrostreptomycin* Obtain a preparation of dihydrostreptomycin suitable for use as a reference and define its potency either in units or in microgram-equivalents

*Aureomycin and terramycin* Establish standards for these two antibiotics

*Chloramphenicol* Establish a reference preparation for this substance. Although it is possible to characterize this antibiotic chemically and physically, biological assay is still used by certain workers; consequently a reference preparation is necessary.

*Baetracin* Establish an international reference preparation since investigation does not seem to have reached a stage which would justify the establishment of an international standard.

*Thyrotrophin and the growth hormone of the anterior pituitary* Establish for each of these hormones a reference preparation which might later be adopted as an international standard.

*Thrombin* Procure a preparation of thrombin and obtain the opinion of interested workers as regards its adoption as an international standard and the unitage to be assigned to it.

As regards fibrinogen and prothrombin research did not appear sufficiently advanced for a decision to be taken.

*Oxophenarsine and dimercaprol* Establish international standards for these two substances which will be included in the *Pharmacopoea Internationalis*.

*Dextro tubocurarine* Establish an international standard chosen so that the unit of potency is the activity contained in 1 mg of the standard preparation.

*Hyaluronidase* Request the opinion of interested workers on the British standard preparation of hyaluronidase and on its suitability as an international standard and consult them regarding the unitage to be assigned to it.

Hyaluronidase is the generic name applied to the group of enzymes depolymerizing hyaluronic acid which occurs in the form of a highly polymerized polysaccharide in the mesenchyma and which opposes the diffusion of liquids injected into this tissue. Hyaluronidase facilitates

ization, which held its fourth session in Geneva from 6 to 11 November 1950<sup>1</sup> During this session, arrangements were made for establishing a certain number of other standards and reference preparations The replacement of standards of which the stocks are nearly exhausted was also arranged A number of questions relating in particular to various toxoids and vaccines including BCG, were discussed

## New Standards

### *Adrenocorticotrophic hormone (ACTH)*

The unit of potency recommended by the committee as an international unit is the activity contained in 1 mg of the international standard preparation The size of this unit was chosen to suit the convenience of the clinician

### *Streptomycin*

The international standard for streptomycin will be a streptomycin sulfate preparation The potency of 1 mg of this preparation corresponds to that of 780 international units or microgram equivalents The sulfate was preferred to the double salt formed by streptomycin hydrochloride and calcium chloride since it is homogeneous and easy to handle being less hygroscopic

### *Blood groups*

A standard for anti A and anti B agglutinating sera was determined by combining the results obtained by eleven laboratories in ten different countries The unit of agglutinating power of anti A serum is the activity contained in 0.3465 mg of the standard preparation and that of anti B serum the activity contained in 0.3520 mg of the standard preparation<sup>2</sup>

The following took part in this session

- Dr J Bretey Chef de la Division de la Tuberculose Institut Pasteur Paris France  
 Professeur E. Grasset Directeur de l'Institut d'Hygiène Geneva Switzerland (*Rapporteur*)  
 Dr O. Maaløe Chief Department of Biological Standardization Statens Serum Institut Copenhagen Denmark  
 Dr A. A. Miles Director Department of Biological Standards National Institute for Medical Research (Medical Research Council) London United Kingdom (*Chairman*)  
 Dr J. Ørskov Director Statens Serum Institut Copenhagen Denmark (*Vice Chairman*)  
 Dr W. L. M. Perry National Institute for Medical Research (Medical Research Council) London United Kingdom  
 Dr I. N. Orpwood Principal Director Venereal Diseases Reference Laboratory (Public Health Laboratory Service) St Peter's Hospital London United Kingdom  
 Professeur J. Tréfouël Directeur de l'Institut Pasteur Paris France  
 Dr M. V. Veldee Medical Director Hyland Laboratories Los Angeles Calif. USA

#### *Secretary*

Dr W. Aeg. Timmerman Director Division of Therapeutic Substances WHO

<sup>1</sup> B. H. H. 11th Org. 1950 3: 301

to facilitate diagnosis of the rickettsioses. The committee noted this recommendation and expressed the opinion that the use of standard rickettsial antigens was to be encouraged. It considered that the grant of technical and financial aid referred to in the report of the joint study group<sup>5</sup> would further the work on the distinction between the various types of rickettsiosis occurring in Africa.

## Vaccines

### *Cholera vaccines*

To establish the provisional reference preparation as an international reference preparation a collaborative assay of freeze dried cholera vaccines of unknown potency in terms of the provisional reference vaccine will be organized between several laboratories.

International preparations of cholera vibrios of the Ogawa and Inaba types in the dried state will be established for use in the preparation of diagnostic antisera in the rabbit.

### *Pertussis vaccine*

A dried vaccine of proved protective value for man will be assayed in several laboratories with a view to establishing it as an international reference preparation of pertussis vaccine.

### *Smallpox vaccine*

The committee felt that in accordance with the resolution of the Third World Health Assembly an investigation should be made of the value of dried smallpox vaccine. Technical directives in this connexion were formulated by the committee.

## Toxoids

### *Diphtheria toxoid*

Two provisional diphtheria toxoid reference preparations were established: one a plain toxoid and the other an aluminium phosphate adsorbed toxoid. The dose response curve of various toxoids will be investigated and interested workers consulted as regards the unitage of immunizing power to be assigned to the reference preparations.

## BCG

### *Liquid or dried vaccine*

In the present state of our knowledge no general recommendation can be made concerning the preferential use of BCG in the liquid or dried form. Although the dried vaccine should have better keeping properties the

penetration of the liquid injected and extends its radius of action. This substance is employed to enhance the effect of local analgesics and to accelerate the absorption of substances injected subcutaneously. The product is now used clinically on a sufficiently large scale to make its standardization necessary.

*Rh blood grouping sera* Establish standards for anti rh (anti C) anti Rh<sup>o</sup> (anti D) and anti rh" (anti E) blood grouping sera of the blocking variety.

*Streptococcus antitoxin* Establish an international standard for streptococcus antitoxin.

*Rickettsial and enteric diagnostic antisera* Distribute these antisera as soon as all sets are completed, to the laboratories selected for the collaborative testing.

*Cardiolipin and lecithin* Establish international standards for the cardiolipin and purified lecithin used in the serodiagnosis of syphilis.<sup>3</sup>

*Pyrogens* The committee was consulted by the Expert Committee on the Unification of Pharmacopoeias as regards the eventual establishment of a standard preparation of pyrogenic substances since a test for pyrogens is to be given in volume II of the *Pharmacopoea Internationalis*. The committee felt that it was at present difficult to decide what type of substance should be used as a standard. It recommended therefore that different specimens of pyrogens from various countries should be collected so as to facilitate further research in this field.

### Replacement of Standards

#### *Digitalis*

Analysis of the results of the assay of the third international digitalis standard carried out in sixteen laboratories in eight countries led to a definition of the international unit of digitalis (third standard) as being the activity contained in 76 mg of the standard preparation.<sup>4</sup>

Various other standards need to be replaced since the available stocks are almost exhausted. The substances involved are penicillin, insulin and sulfarsphenamine. The results of the assay of histolyticus antitoxin carried out in several laboratories in order to establish the new standard will soon be available.

### Diagnostic Rickettsial Suspensions

The Joint OIHP/WHO Study Group on African Rickettsioses had recommended the preparation of standard suspensions of various rickettsiae.

An article on the preparation of these substances will appear in a forthcoming number of the *Bulletin of the World Health Organization*.  
Bull. World Health Org. 1950 2: 645. Summarized in *Chron. World Health Org.* 1950 4: 347.

in countries where chest surgery had already been practised and where there were surgeons of sufficient experience to profit from the demonstrations. In some of the countries surgeons had been doing experimental cardiac surgery on dogs and had practised some of the operations on cadavers. They were therefore able to use the presence and assistance of the visiting team to start operating on living patients. Actually the availability of adequately skilled surgeons in the recipient countries was the least difficult prerequisite to fulfil. The need for fully trained anaesthesiologists and nurses often presented greater difficulties. Among other essential requirements were adequate standards in pre- and post-operative treatment, blood banks, laboratory facilities, etc. In all the countries visited by the WHO teams, conditions were only more or less favourable, but in all of them they were satisfactory enough to ensure the success of the project.

During the summer of 1948 three thoracic surgeons—Professors C. Price Thomas of London and Clarence Crafoord of Stockholm and Dr. H. Good of Basel—together with their supporting staffs visited Poland for approximately one month. When a WHO representative went to Poland one year later, Dr. Manteuffel, chief thoracic surgeon at the Hospital of the Transfiguration in Warsaw, could already demonstrate blue babies on whom he had performed successful operations.

During the visit of Professor Crafoord's team to Vienna in the early summer of 1950, operations on the following were demonstrated: 1 case of patent ductus arteriosus, 2 cases of coarctation of the aorta, 5 cases of tetralogy of Fallot (Blalock-Taussig operation), 1 case of tetralogy of Fallot in which an end-to-end anastomosis between the subclavian and pulmonary arteries was performed, and 2 cases of atresia of the tricuspidal valve (Blalock-Taussig operation). All of these were performed at the Second Surgical Clinic of Professor W. Denk, who assisted Professor Crafoord and later, towards the end of the project, performed the operations himself with Professor Crafoord assisting. In his report on the visit of the team, Professor Denk said that thanks to the work of the team and to the instruments and apparatus supplied, surgical treatment of congenital heart disease could now be carried out in Austria. The team had thereby "provided most important assistance to Austrian medicine and also a powerful stimulus for continued work in this important and interesting field. In a later report, Professor Denk added: "How important it was that the team came to Vienna and that the possibility of performing these operations has been created can be judged by the fact that not only are 40 out of the 80 now assembled cases of congenital heart disease suitable for and in need of surgical treatment, but also that from all over Austria new inquiries and requests for admission are being received at the clinic daily."

The situation was somewhat similar in Yugoslavia, where the government assembled a considerable number of suitable patients from all over



production of freeze dried vaccine may be beyond the facilities of some laboratories capable of preparing a good liquid vaccine. The committee decided to investigate certain reports that liquid vaccines retain their properties much longer than was previously thought.

#### *Centres for the testing and preparation of BCG vaccine*

In response to the request of the United Nations International Children's Emergency Fund (UNICEF) the committee recommended that the BCG pilot station in Paris and the WHO Tuberculosis Research Office Copenhagen be recognized as centres for the periodic testing of BCG vaccine.

Furthermore it approved the reports on the laboratories for the preparation of BCG at Athens, Casablanca, Mexico City, Parkville, Saigon, Tripoli, and Tunis.

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## WHO CONGENITAL HEART DISEASE TEAMS

Because of the specific needs of certain geographical areas and the varying stages of medical development of Member States, WHO advisory and demonstration services cover a wide range of activities, both as to subjects and as to the degree of specialization within them. In under developed areas, efforts have to be concentrated on introducing fundamental health procedures and techniques; in more advanced countries where such skills may be taken for granted, WHO has to provide services of a more specialized nature.

Among the projects specifically designed for the medically more advanced countries are the WHO congenital heart disease teams. These teams, which have to date visited Austria, Israel, Poland, Turkey and Yugoslavia, are really thoracic surgery teams rather than groups dealing exclusively with congenital heart disease, though emphasis has been placed on modern diagnostic methods and surgical treatment of congenital malformations of the heart. The composition of the teams and their programmes have been adapted to the particular circumstances of the countries visited. Expert cardiologists have accompanied two of the teams. Dr E. Mannheimer, of Stockholm, visited Austria and Yugoslavia. Dr A. T. Hansen of Copenhagen visited Israel and Turkey.

A number of prerequisites had to be met for the host countries to derive the full benefit of such short demonstration periods as those afforded by the WHO surgical teams. In none of the countries visited had any operations ever been performed for congenital heart disease, with one exception, in all of them cardiac surgery was successfully introduced by team visits of from two to four weeks. This obviously could be accomplished only

tuberculous cavity 1 thoracoplasty (Overholt) 2 oesophagoplasties for caustic stricture 1 gastro oesophageal resection for caustic stricture 1 closure of broncho oesophageal fistula 1 extraction of foreign body from the oesophagus and 2 diaphragmatic herniotomies. In addition to performing these operations the team examined a considerable number of patients gave lectures on the surgical treatment of pulmonary tuberculosis anaesthesia for chest surgery and modern diagnostic methods in congenital heart disease held informal discussion meetings and demonstrated bronchoscopy oesophagoscopy cardiac catheterization and other techniques.

During the team's two weeks visit to Israel 13 surgical operations were performed including lobectomies Blalock and Barrett procedures for tetralogy of Fallot closures of patent ductus arteriosus a valvulotomy for mitral stenosis and a not very commonly performed valvulotomy for pulmonary stenosis.

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## FIRST SEMINAR FOR EUROPEAN SANITARY ENGINEERS

The first seminar for European sanitary engineers held at The Hague from 27 November to 2 December 1950 was sponsored jointly by the Government of the Netherlands the International Health Division of the Rockefeller Foundation and the World Health Organization. Sixteen European nations sent as delegates to the meeting their senior sanitary engineers or in lieu of such personnel those most directly concerned with environmental sanitation. There were 40 representatives of governments and 14 representatives of the sponsoring agencies making a total of 54 participants.

The primary objectives of the conference were

- (1) To disseminate knowledge of the status and needs of sanitary engineering in the various countries
- (2) To stimulate and co ordinate European research in environmental sanitation
- (3) To bring about closer relationships between sanitary engineers in the countries of Europe

The programme was designed to produce an informal atmosphere and to promote free discussion minor emphasis being given to prepared papers. Papers and discussions covered a large number of the subjects included in environmental sanitation. Intensive and prolonged discussions on technical points were purposely avoided at this first seminar in an attempt to obtain

the country, in Zagreb, where surgeons from the whole country came to witness the operations and to attend lectures and discussions. Since the team left, reports have been received from Yugoslavia on the first few successful operations on blue babies performed by Yugoslav surgeons.

Last November a Danish team under the leadership of Professor E. Husfeld, of Copenhagen, visited the universities of Istanbul and Ankara and then proceeded to Israel. In Turkey the team worked in close

FIG. 4 CONGENITAL HEART DISEASE TEAMS



Thoracic surgery team under Professor Husfeld at work in an operating theatre at Istanbul

co operation with the WHO Tuberculosis Demonstration Centre in Istanbul and considerable attention was given to resections, pneumonectomies, etc.—operations which had not yet become routine with thoracic surgeons in that country. The following were performed during the team's one month visit in Turkey: 4 pericardiectomies for constrictive pericarditis, 4 Blalock operations and 1 Barrett operation for tetralogy of Fallot, 2 valvulotomies for mitral stenosis, 1 exploratory thoracotomy for cancer, 2 lobectomies for hydatid cysts, 4 lobectomies for tuberculosis and bronchiectasis, 5 pneumonectomies for tuberculosis, bronchiectasis and cancer, 2 decortications for chronic empyema, 1 Monaldi operation for

ultimate objective with regard to education should be the provision of full postgraduate training of men adequately grounded in the basic engineering sciences. Until this objective can be attained it is recognized that undergraduate training will be necessary)

(f) There is a real need for the unhampered distribution of technical literature on public health subjects and every encouragement should be given to the several agencies concerned with facilitating this work

(g) A committee should be appointed to give further consideration to ways and means of attaining the objectives outlined above

(h) Seminars such as the present one should be repeated and WHO should immediately study the possibility of more systematic contact among sanitary engineering experts throughout Europe

The greatest benefits of this meeting are believed to be the intangible and invisible ones. For the first time the leading sanitary engineers of all the European countries which are now Member States of WHO were brought together. There was complete compatibility and friendships were formed which will continue through the years. Although some delegates arrived feeling sceptical about the benefits of the meeting all left it with enthusiastic praise for what it had accomplished and with a demand that a similar meeting be held in 1951

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## AN IMPORTANT STUDY ON MATERNAL CARE AND MENTAL HEALTH

The Social Commission of the United Nations at its third session (April 1948) resolved to undertake a study of the needs of homeless children — homeless in this instance referring to those separated from their families in their native countries thus excluding refugee children. WHO offered to contribute a study on the mental health aspects of the problem of homeless children and this offer having been accepted appointed Dr. John Bowlby, Director of the Child Guidance Department of the Tavistock Clinic, London, to make a survey which took him to France, the Netherlands, Sweden, Switzerland, the United Kingdom, and the USA. The results of this investigation and of extensive literature searches have been summarized in a report "Maternal care and mental health" which is now published as No. 2 of the *World Health Organization Monograph Series*<sup>1</sup>

Dr. Bowlby's report is much wider in scope than its title might suggest although Part I is chiefly concerned with the adverse effects of deprivation

a general picture of the whole field which might serve as a point of departure in drawing up programmes for future seminars. The objective of having a seminar rather than a congress was satisfactorily achieved.

The seminar reached the following conclusions:

(a) The utilization of modern public health techniques provides an ever increasing opportunity for raising living standards and improving economic conditions, in Europe and throughout the world. Modern public health practice requires the co-operation of various professions and the utilization of a vast and complex store of scientific knowledge.

(b) Interchange of knowledge between European countries and collaboration between sanitary engineers and medical hygienists are essential, and WHO can play an important role in their promotion.

(c) It was recognized that in all countries the improvement of environmental conditions is essential to the well being and productivity of mankind. The installation of necessary sanitary works has been retarded by financial difficulties. There is need to develop an awareness of the economic and social value of sanitary works and of the necessity for providing adequate financial support.

(d) Because of the lack of basic information on many of the subjects which were covered during the seminar, and because of the varying needs in different countries, fundamental research and practical investigations are urgently needed in order to provide practical and economic solutions to many sanitary problems. In order to avoid duplication and to increase the productivity of individual research projects, it is considered advisable that a central agency be designated to co-ordinate and correlate this work with particular emphasis on methods, standards and measures. It is hoped that such co-ordination will facilitate the formulation of international standards in environmental sanitation. One type of problem which might be studied by such a committee is the total management of water economy. Thus, through co-ordinated activity, various phases of the problem, such as demineralization of brackish water, pollution of natural ground water and re-use of liquid wastes, could be integrated into an overall programme. The facilities of WHO appear to be suited to this co-ordination and correlation, and it is hoped that the Organization will give consideration to the possibility of undertaking such a function.

(e) Control of the environment is now recognized as an important function in public health practice, and engineering techniques and the use of engineering personnel are becoming increasingly important. It therefore seems desirable that governments should have in their public health organizations adequate provision for the utilization of engineering sciences. Such engineering services should be staffed with adequately trained professional personnel, and in addition provision should be made either on a national or a regional basis for the education of such personnel. (The

In discussing the care of sick children Dr Bowlby calls attention to the possible emotional and psychological maladjustments which are apt to arise from lengthy hospitalization. It has been shown that children respond to treatment much better if their mothers have a part in their care. Whenever possible the sick child should be kept at home. If hospitalization cannot be avoided steps should be taken to enable the mother to spend as much time with the child as is practicable even if this entails providing domestic aid for the household and admitting the mother to the hospital along with the child.

In addition to discussing these various aspects of maternal deprivation and its prevention Dr Bowlby points to the need for research on the problem of homeless children suggesting as subjects (1) the forces affecting family life which make its functioning inadequate (2) the relative contribution of each of these forces in depriving children of maternal care and (3) the best way to care for children outside their homes when this course of action becomes necessary.

Homeless children represent a real public health problem as Dr Bowlby makes clear in his conclusion.

The proper care of children deprived of a normal home life can now be seen to be not merely an act of common humanity but to be essential for the mental and social welfare of a community. For when their care is neglected they grow up to reproduce themselves. Deprived children whether in their own homes or out of them are a source of social infection as real and serious as are carriers of diphtheria and typhoid. And just as preventive measures have reduced these diseases to negligible proportions so can determined action greatly reduce the number of deprived children in our midst and the growth of adults liable to produce more of them. To those charged with preventive action the present position may be likened to that facing their predecessors responsible for public health a century ago. There was a great opportunity for ridding their countries of dirt borne diseases some took it others remained hypercritical of the evidence and inert. Let it be hoped then that all over the world men and women in public life will recognize the relation of mental health to maternal care and will seize their opportunities for promoting courageous and far reaching reforms."

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## INSECTICIDES AND PUBLIC HEALTH

Several articles on the control of insect vectors of disease and their destruction by means of residual insecticides have recently appeared in the *Bulletin of the World Health Organization*.

Malaria control by means of residual insecticides undertaken in all parts of the world has given impressive results. In countries such as Argentina Greece and Italy where malaria was a traditional scourge it has now ceased to be a public health problem. The regression of endemicity in all countries where the campaign has been carried on and in which

of maternal care and Part II with the prevention of such deprivation. Under the latter heading however, Dr Bowlby deals with the psychological aspects of a number of sociological problems—the causes and prevention of failure of the family, illegitimacy, adoption foster and boarding homes, institutions for children, the care of maladjusted and sick children and the administration of child care services.

Dr Bowlby emphasizes the importance to the healthy psychological development of children of a normal, stable family life during the early formative years. An infant needs a warm continuous relationship with his mother or permanent mother substitute. Deprived of this relationship he more often than not suffers serious retardation in development physically and socially as well as mentally. Infants confined to institutions for a considerable length of time usually present a picture of pallor, emaciation, and unresponsiveness. The emotional trauma caused by deprivation of maternal care in early life often results in adult maladjustments. prolonged deprivation may foster the development of an affectionless, psychopathic character given to delinquent behaviour. A love starved infant may become an adult incapable of making satisfactory human relationships. It is easier to prevent deprivation of maternal care than to eradicate its ill effects.

Child care studies indicate that even a bad home usually provides a healthier emotional environment than does a good institution. It therefore becomes the duty of governments and social agencies to try to keep the family intact in so far as possible and to strengthen family relationships rather than to separate children from their parents. This may necessitate supplying financial assistance, medical or psychological care for parents or children, or even in some cases domestic help.

If a situation arises which absolutely requires removal of a child from his home then the next step is to try to provide the most satisfactory substitute. Sometimes relatives may prove to be the answer. failing this a suitable foster home should be found. The best foster home is one in which the proxy parents have a real understanding of children and, possibly children of their own.

When institutional care must be resorted to every effort should be made to create a homelike atmosphere in the institution. The cottage type of arrangement in which small groups of children are entrusted to the care of specially trained house parents is most successful in achieving this goal.

In any solution to the problem of a home for homeless children the primary requisite is provision of a satisfactory mother substitute with whom a compensatory relationship can be developed. An arrangement which ignores the essential nature of this relationship is from a psychological standpoint, doomed to failure. In every case the individual child and his needs must be studied before any major decisions are reached. Generally, outpatient methods of observation are best for such study.

localities the parasite index fell to zero. In 1950 about 2 650 000 houses were treated and about 12 750 000 persons protected.

In Ecuador a nation wide scheme of malaria control by residual spraying was started in 1949 and in March 1950 already some 800 000 inhabitants were protected.

In the USA the action of DDT has accelerated a natural decline in malaria infection which has been apparent since 1935. The campaign has been limited to 13 States considered as malarious. In 1945 the Communicable Disease Center of the US Public Health Service began to study the possibility of reducing transmission of the disease so that malaria should cease to exist as a public health problem and it may be said that to all intents and purposes this aim was achieved by 1949. The malaria mortality rate per 100 000 inhabitants over the whole of the 13 States in question declined from 12.6 in 1933 to 0.4 in 1948.

In British Guiana the campaign began in January 1947. By the following year more than 90% of the population had been protected. In one village for example the spleen index fell from 71.6% in 1945 to 4% in 1948. In 1947 the total cost of the DDT spraying and the hospitalization of patients was less than the costs of hospitalization alone in 1945 not counting the loss of wages due to the disease. In addition complete prophylaxis against yellow fever was effected and transmission of filariasis considerably reduced.

Nearly all the States of Mexico are affected by malaria. The annual number of cases was estimated in 1946 as 2 millions and the malaria mortality rate was 110.3 per 100 000 inhabitants. In 1948 DDT was applied in 13 States. The necessary information for the evaluation of the results of the campaign is not yet available but a considerable reduction in the number of vector anophelines has been observed in some regions they have completely disappeared.

In Peru 3 million of the total of some 8 million inhabitants live in malarious zones. The cost of the campaign if extended to the whole of the population of these zones would represent only one fifth of the annual loss caused by malaria. As a result of the campaign undertaken in 1946 the parasite index in the Lima zone for example fell from 13.4% (average for the years 1942-6) to 0.06% in 1949.

In Venezuela the national campaign is to cover 600 000 km<sup>2</sup>. In 1948 about 863 000 persons were protected. In one of the localities of a hyper endemic region the spleen index which was 98.6% in 1945 fell to 15.5% in 1949.

In Asia Ceylon was the first country to undertake control by DDT spraying on a national level. Most of the 7 300 000 inhabitants live in the malarious zone which covers two thirds of the island. As a result of the campaign infant mortality over the country as a whole in 1949 was only 62% of what it was in 1946 the greatest decrease being shown in the most malarious regions.



millions of people have been protected has brought about a reduction in malaria mortality- and morbidity rates a general rise in public health standards, increased manpower efficiency, and a higher agricultural and industrial output This is proved by the data supplied to WHO concerning 35 countries of Africa, America, Asia, and Europe, several of which have requested WHO's technical assistance for the implementation of their control programmes These data were analysed and commented upon by Dr E J Pampana, Chief WHO Malaria Section, in an article written by him at the suggestion of members of the Executive Board on large scale malaria control campaigns using residual insecticides<sup>1</sup> The following is a summary of the most important points

In the Union of South Africa antilarval measures and residual insecticide spraying were applied to 108,000 km<sup>2</sup> of the malarious area of 150 000 km<sup>2</sup>, in over 45 000 km<sup>2</sup> the technique adopted was that of DDT indoor residual spraying only After the application of all these measures it was shown that blackwater fever had disappeared and that there was an impressive regression in the spleen and parasite indices In Southern Rhodesia similar results have been obtained

In Madagascar, the campaign began in September 1949 A year later more than 1 million inhabitants had been protected

In Mauritius where malaria is very widespread and takes a serious form the campaign—which aimed at eradication of the *Anopheles gambiae* and *A funestus* vector species—began in January 1949 By June 1949, *A funestus* seemed to have disappeared from most of the treated territory There was a significant reduction in the general and infant mortality figures for 1949 compared with those of previous years

In Argentina eradication campaigns began in 1947 During the first six months of 1949 some 2 800 cases of malaria were notified as against 300 000 annually before the commencement of the campaign The author cites Alvarado et al, according to whom endemic malaria has ceased to be a health and social problem in Argentina

In Bolivia nearly half the population lives in malarious territory In 1946 in the sectors under the control of the Special Prophylaxis Service malarial morbidity was 21% and mortality 2%

In Brazil malaria is encountered almost everywhere and it is perhaps in this country that the most extensive control programme has been applied Although the residual spraying is not effective against certain vector species which are not particularly domestic it is extremely efficacious in dealing with the chief vector *A darlingi* A vast programme of control by means of DDT spraying was undertaken in 1947 The total number of cases of malaria notified in a certain number of localities subjected to treatment since 1947 or 1948 fell from 18 297 in 1945 to 976 in 1949 in several

<sup>1</sup> Bull World Health Org 1951 3 557 (Article in French with summary in English and French)

and parasite indices was observed after DDT spraying. The formulations used were DDT Aromex soap emulsion and water wettable powders.

The flight range of gravid and newly emerged anopheles is the subject of an article by Antonio Ejercito and Cornelio M. Urbino of the Section of Malaria Control, Division of Laboratories, Department of Health, Manila, Philippines<sup>3</sup>. During an experiment carried out in 1937 at Tungkong Manga, Philippines, the authors demonstrated by the recapture of marked mosquitos (0.14% of released insects were recaptured) that the flight range varied between 640 m and 2,016 m. In the majority of cases the flight only deviated very slightly from the direction of the wind.

It is known that a secondary result of the action of residual insecticides on anopheles has been the destruction of other insect and acarid vectors of disease. There is already extensive literature on the subject and the various published works have been reviewed by Dr. S. W. Simmons, Scientist Director, Chief Technical Development Services, Communicable Disease Center, US Public Health Service, Savannah, Ga., USA, and member of the Expert Committee on Insecticides of the World Health Organization, and Dr. W. M. Upholt, Senior Scientist, Assistant Chief Technical Development Services, Communicable Disease Center, US Public Health Service, Savannah, Ga., USA, in an article entitled "Disease control with insecticides"<sup>4</sup>. After giving the results obtained in the campaign against malaria, the authors describe the action of the insecticides on vectors of various other diseases. The following is a summary of this part of their study:

As regards urban yellow fever and dengue fever, although valid epidemiological evidence is not available, there should be little doubt as to the effectiveness of insecticides in the control of these diseases. In the case of epidemic encephalitis, an additional factor, that of unknown vectors, has established this disease as unique, in that failure to control it with specific insecticides may be used as evidence of the existence of unknown vectors. Filariasis is a disease which should certainly be susceptible to control by insecticides, and since it is of such widespread importance in tropical countries, it may be expected that more evidence will be available in the future.

Of louse and flea borne diseases, there is abundant evidence that typhus and plague have been greatly reduced by the use of DDT. DDT was first introduced in the control of epidemic typhus during the second World War. However, other methods of control, including immunization, have been so widely used that an objective evaluation of the importance of insecticides is difficult to obtain.

In the case of those diseases believed to be transmitted by filth flies, valid epidemiological evidence is not great. It is apparent that fly control

In India, Bombay State furnishes an excellent example of treatment of rural zones. At the end of 1950 the campaign covered seven districts and protected about 5½ million inhabitants. It is estimated that in the protected region the annual number of cases of malaria has decreased by about 300,000. In addition plague has disappeared and, in the centres where stables have been treated, mortality from diarrhoea or dysentery has diminished. The report on the 1947-8 campaign shows that in a treated village in Delhi Province the infant parasite rate was nil as against 20% in a non-treated control village, the number of cases of malaria was 16 times greater in the non-treated than in the treated village.

Only four European countries are dealt with: Greece, Italy, Portugal and Yugoslavia whose campaigns are based on the practice of residual spraying. In Greece which is considered as the most malarious country in Europe morbidity was approximately 1 million to 2 million cases per year between 1930 and 1940. Malaria took second place among the causes of infant mortality. After an intensive campaign for four years, malaria has ceased to constitute a serious public health problem. It was estimated that between 1946 and 1949 19,000 human lives and 80 million working days were saved. Moreover the campaign also brought about a regression in leishmaniasis, the disappearance of pappataei fever, and the suppression of sandflies in certain localities. The protection of peasants from malaria has made it possible to extend rice cultivation, the production of certain farms appears to have increased by about 40%.

One of the first experiments in malaria control by DDT residual spraying was carried out in Italy in 1944. In 1942 the morbidity rate was 3,629 per million inhabitants, the mortality rate 23.77 per million and the case fatality rate 0.6%. In 1949 the morbidity rate had fallen to 422 per million and the other two rates had reached zero.

In Portugal 50,000 to 70,000 persons per year were affected by malaria before the campaign. DDT and benzene hexachloride have been used since 1948. The results of the campaign are not yet known.

In Yugoslavia the national control plan was commenced in 1947 and about 5 million inhabitants of the malarious region are now protected. The necessary labour is supplied gratis by certain popular organizations. As a result of spraying malaria morbidity has considerably decreased, there is no longer an autumnal peak corresponding to new infections.

Malaria control is also the subject of a study of regional interest entitled 'Malaria control using indoor residual sprays in the Eastern Province of Afghanistan' - by T. Ramachandra Rao, leader of the WHO Malaria Control Demonstration Team to Afghanistan. The author describes a short malaria survey and a small scale demonstration project for malaria control which were carried out in Laghman District from July to October 1949. A marked decrease in morbidity as shown in the spleen

in accordance with which the United Nations and the specialized agencies will provide technical assistance for the project. WHO's contribution for the first year will amount to approximately \$150 000 which will be expended on equipment supplies and training fellowships. The Government of El Salvador through its Ministry of Public Health and Assistance will provide approximately \$200 000 during the same period for health personnel buildings and supplies. The Government has already trained more than 25 people to work in different phases of the project.

The demonstration area which will be in the central part of the Republic just north of the city of San Salvador has a population of 100 000. It was selected as a typical rural area representative of large regions in Latin America. Headquarters will be the town of Quezaltepeque (population 16 000) which has contributed land and buildings for the demonstration project. Eleven other towns have offered facilities for clinics and several have offered funds for sanitation improvements. These contributions supplement those of the Government itself and are an expression of the spirit of co-operation in which the project is being undertaken.

All aspects of public health will be included in the demonstration project—environmental sanitation, maternal and child health, nutrition, control of malaria, tuberculosis and other communicable diseases, dental hygiene, laboratory services, health education and public health training. Assistance in drawing up the plans was given by Dr M. I. Roemer, Assistant Professor of Public Health at Yale University who was loaned to WHO to make a ten week survey of the Republic's needs and to give advice on how to meet them. Plans for other programmes to be integrated with the health demonstration project, e.g. in agriculture, labour relations, education and social welfare—are in progress.

### Malaria Course in Lisbon

A malaria training-course of two-and-a-half months' duration commencing 4 June 1951 will be held at the Malaria Institute, Aguas de Moura, and at the Institute of Tropical Medicine, Lisbon, under the auspices of WHO and the Portuguese Ministry of the Interior, Directorate General of Health. Training will consist of laboratory courses as well as field trips. Instruction will be given in French. Approximately ten Fellows will be accepted. Applications sponsored as usual by national health administrations and recommended by regional offices should be sent as soon as possible to WHO Headquarters at Geneva.

### Malaria Control in Indonesia

WHO has agreed to provide international personnel to aid in an antimalaria campaign in Tjilatjap on the south coast of Java. A training centre for local malaria workers will also be included in the project. It is expected that supplies and equipment will be provided by the Economic Co-operation Administration (ECA).

### Antimalaria Campaign in Thailand

A UNICEF/WHO malaria-control team operating in North Thailand is training 14 Thai workers for field and laboratory service in projects to be launched in other parts of the country with equipment and supplies to be provided by the Economic Co-operation Administration (ECA). DDT spraying in North Thailand has had a welcome side-effect: it has rid houses of bedbugs so that villagers now claim to enjoy sound sleep for the first time in their lives. In unsprayed houses an average of four bedbugs per square foot of the floor under the bed has been recorded.

cannot be expected to give more than partial control over enteric disease such as diarrhoea and dysentery. Some epidemiological evidence exists as to effectiveness of insecticides in the control of sandfly fever, leishmaniasis, and bartonellosis. In the case of onchocerciasis although have resulted in the control of the vector, no epidemiological evidence has been published on the effect on the incidence of the disease, probably a result of the very long incubation period.

African sleeping sickness appears to be the one insect borne against which insecticides have so far been of little value. Chagas may be in this category but there is reason to believe that it is now succumbing to insecticidal measures. Scrub typhus is apparently adequately controlled through the use of repellents, but there seems to be little epidemiological evidence available in the literature.

In Egypt, housefly breeding has become a public health menace. Interest in the problem was stimulated during the 1947 cholera epidemic, during which a campaign for the destruction of houseflies was organized. In an article entitled 'Preliminary studies on houseflies in Egypt', Dr S. Madwar, Director General Endemic Diseases Department, Ministry of Public Health, Cairo, Egypt, and Dr A. R. Zahar, Head of Fly Control Branch, Insect Eradication Section, Ministry of Public Health, Cairo, Egypt describe the various methods adopted for estimating the density of housefly populations (fly grids, tanglefoot paper, and bait traps). The capture of the insects made it possible to establish that there are seasonal variations—an increase in the number of insects in April, a decrease from the end of May to August, and an increase again during the autumn. Control is difficult owing to the poor sanitary conditions which encourage the formation of breeding places. The results obtained with residual insecticides vary. They are often unsatisfactory where the flies are numerous and where certain strains have possibly become DDT resistant, and on the other hand remarkably good elsewhere. Further investigations are proceeding.

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<sup>1</sup> *Bull. World Health Org.* 1951, 3, 621 (Article in English with summary in English and French).

## Notes and News

### Health Demonstration Area to be Established in El Salvador

The first health demonstration area to be established in the Americas under the United Nations Technical Assistance Programme will be located in El Salvador. This announcement was recently made by Dr F. L. Soper, Director of the WHO Regional Office for the Americas, who signed an agreement with the Government of El Salvador



# CHRONICLE OF THE WORLD HEALTH ORGANIZATION

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## Saudi Arabia to Receive WHO Assistance

Following a visit to Saudi Arabia by Dr W Omar head of the Epidemiology<sup>1</sup> of the WHO Regional Office for the Eastern Mediterranean plans are being drawn for assistance to this country in a number of health projects and programmes

1 Building and equipping a new quarantine station at the port of Jeddah, which about 70 000 Moslem pilgrims pass every year The Saudi Arabian Government is to erect the building and WHO is to contribute laboratory equipment and the services of two medical experts under provisions of the United Nations Technical Assistance Programme

2 A fellowship programme which will include in addition to two grants for studies in tuberculosis and in bacteriology awards for basic medical in an effort to try to augment the country's very limited number of doctors

3 Aid in environmental sanitation improvements WHO to supply the services of a sanitary engineer

4 A malaria-control project under the Technical Assistance Programme

5 Expert advice concerning public health administration maternal and child health and venereal diseases

6 Expert assistance in a mass BCG vaccination programme against tuberculosis.

## Meeting on Draft International Sanitary Regulations

The Special Committee for considering the Draft International Sanitary Regulations will meet on 9 April 1951 at the Palais des Nations Geneva This committee the establishment of which was approved by the Third World Health Assembly<sup>2</sup> is being convened to give Member States an opportunity to discuss the various regulations before a final draft is submitted to the Fourth Health Assembly for approval

## World Health Day

Suggestions and background material for the annual celebration of World Health Day on 7 April (date of the entry into force of the WHO Constitution) have been forwarded to Member Governments The theme selected for this year is "Health for Your Child and the World's Children" the aim being to promote interest particularly in services concerned with maternal and child health

## New Ratifications of Constitution

Laos Cambodia Viet Nam the Republic of the United States of Indonesia, and Panama (in order of date of ratification) have been added to the list of countries which have accepted the WHO Constitution<sup>2</sup> This brings the total number of ratifications to 75 as of 1 March 1951

<sup>1</sup> *Chron World Hlth Org* 1950 4 27

*Chron World Hlth Org* 1949 3 98 1950 4 32 194

# MALARIA CONFERENCE IN EQUATORIAL AFRICA

As Dr E J Pampana states in a recent study<sup>1</sup> it is surprising that Africa perhaps the most malaria ridden of all continents is also the one in which modern methods of control using residual insecticides have been introduced most tardily and then only to a limited extent

Considering malaria in rural districts alone and excluding urban areas it is seen that this metbodical control has so far been undertaken in only a few regions such as the Union of South Africa Southern Rhodesia Madagascar and Mauritius<sup>2</sup> In fact from the Sahara to southern Africa malaria is still everywhere a major scourge The problem of control over this vast area is so complex that no single solution valid everywhere can be found For from the savannah of the Sudan through the vast equatorial jungle to the semidesert table land the degree of malaria endemicity varies with the geographical conditions climate species of vector anopheles—whose behaviour varies according to the region—and the living conditions of the inhabitants

Two basic questions dominate the problem of malaria control in these territories

(a) Is it advisable to combat malaria in the so called hyperendemic areas (where there is a high degree of transmission and the disease is transmitted throughout the year) in which the adult population has reached a high degree of collective immunity?

(b) How effective are residual insecticides against the most important vector *Anopheles gambiae* whose behaviour varies according to the region?

The Malaria Conference in Equatorial Africa which met from 27 November to 9 December 1950 at Kampala (Uganda) under the auspices of WHO and of the Commission for Technical Co-operation in Africa South of the Sahara (CCTA) studied these problems which are peculiar to Africa This conference which was not intergovernmental but of a purely technical nature was attended by malariologists of the whole world Various reports<sup>3</sup> on the malaria situation in Africa and the experiments already made together with an account of a general survey by one of the experts of WHO Professor F J C Cambournac after a seven month tour in Equatorial Africa served as a basis for discussions

The various statements made to the conference and the discussions which took place there are summarized below The report of the conference together with the recommendations it adopted has recently been published as No 38 of the *World Health Organization Technical Report Series*

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## RECENT AND FORTHCOMING MEETINGS

### 1950

- 2 9 November WHO Expert Committee on International Epidemiology and Quarantine Legal Subcommittee third session Geneva
- 6-7 November WHO Expert Committee on the Unification of Pharmacopoeias Subcommittee on Non Proprietary Names first session Geneva
- 6 11 November WHO Expert Committee on Biological Standardization fourth session Geneva
- 6 13 November FAO/WHO Expert Panel on Brucellosis first session Washington
- 27 November Commission for Technical Co operation in Africa WHO Malana
- 9 December Conference in Equatorial Africa Kampala Uganda
- 11 12 December Preparatory Working Group on a Public Health Administration Seminar Geneva
- 11 16 December WHO Expert Committee on Malaria fourth session Kampala Uganda
- 11 16 December WHO Expert Committee on Mental Health Subcommittee on Alcoholism first session Geneva
- 11 16 December Joint WHO/FAO Expert Group on Zoonoses first session Geneva

### 1951

- 8 30 January WHO Executive Board Standing Committee on Administration and Finance Geneva
- 22 January WHO Executive Board seventh session Geneva
- 5 February
- 30 January Léon Bernard Foundation Committee Geneva
- 9 April 4 May WHO Special Committee to consider the Draft International Sanitary Regulations prepared by the Expert Committee on International Epidemiology and Quarantine Geneva
- 10-17 April Joint FAO/WHO Expert Committee on Nutrition second session Rome
- 19 28 April WHO Expert Committee on the Unification of Pharmacopoeias eighth session Geneva
- 30 April 1 May WHO Expert Committee on the Unification of Pharmacopoeias Subcommittee on Non Proprietary Names second session
- 7 May Fourth World Health Assembly Geneva
- 28 30 May WHO Consultative Committee for Europe first session Geneva
- 1 16 June WHO Executive Board eighth session Geneva

FIG 1 CONFERENCE ON MALARIA IN EQUATORIAL AFRICA KAMPALA UGANDA



Group of participants

*A. funestus* generally shows a high degree of anthropophilism and endophilism. In Uganda and South Africa it does not seem to fly more than some 800 m in the absence of any prevailing wind and as an agent propagating the disease it is therefore not very dangerous. Yet in Rhodesia flights of up to 8 km with the wind have been registered. It remains relatively stable in numbers and is therefore considered partially responsible for endemic malaria. It was possible to impute a recent epidemic in Kenya to this insect.

#### *Morbidity and mortality due to malaria*

Statistics on morbidity and mortality due to malaria are very incomplete for the whole of the African territory concerned. Even in well organized communities it is difficult to prepare statistics and they are naturally quite rudimentary in regions where the health administration is not yet very highly developed. It is difficult in particular to appreciate the exact influence of malaria in a human population suffering from various diseases.

## Malaria in Equatorial Africa

### Geographical distribution

The transmission of malaria takes place throughout the year along the African coasts, whether in the west or in the east, up to a more or less considerable distance inland, as well as in a large part of the continent situated between latitude  $10^{\circ}$  north and latitude  $10^{\circ}$  south, wherever the altitude is below about 1,400 m. These are areas where hyperendemicity is the rule and where the incidence of blackwater fever is at its highest. However, as regards the west coast the transmission period is shortened even in regions very near the sea, southwards from latitude  $8^{\circ}$  south, because of the cold Benguela current and the central mountain group of the continent which, inter alia, has the effect of markedly reducing the length of the rainy season from this latitude southwards.

As the altitude increases the transmission period becomes shorter. At 1,400 m the incidence of malaria is still strong but, around 1,800 m, the epidemic type becomes the rule.

the temperature at lower altitudes may already be sufficiently low to arrest completely or diminish transmission during a more or less long period of the year.

"However, limiting altitudes at which malaria ceases or where the disease would be more or less severe cannot be fixed, since everything depends on the climate and not on the altitude factor alone. For example in Kenya malaria of the epidemic type is still prevalent towards 2,000 m and does not disappear until 2,700 m."

### Vector anopheles

Two species of anopheles are mainly responsible for mass infection in tropical Africa: *A. gambiae* and *A. funestus*. Of the two, *A. gambiae* is by far the more important and it is curious to note how widely its behaviour differs from region to region. This mosquito is considered essentially anthropophilic and endophilic. Yet at high altitudes in Ethiopia and on the High Veld of the Transvaal it is clearly zoophilic and less endophilic while in Kenya also at a high altitude it is responsible for the transmission of malaria. In Southern Africa it shows marked endophilism but in West Africa, Tanganyika, and Uganda on the other hand, it attacks man in the open air. It bites during the day in the jungle of Uganda, whereas elsewhere it bites during the night. In Northern Rhodesia *A. gambiae* has been proved capable of reaching a distance of over 6 km from its breeding place. The kind of life it leads seems to depend largely on climatic conditions and it is therefore not advisable to establish the biological varieties of this species to account for variations in its behaviour before the question has been thoroughly examined.

On the other hand groups of people from highly infected areas who are thus immunized lose their immunity on going to work in less infested areas. For instance workers in the copper mines of Northern Rhodesia often show very grave forms of malaria when they return to their place of origin in the hyperendemic areas.

Infection by strains of malaria parasite different from those of their place of origin often cause very serious forms of the disease among workers. This is the case with the Tukurres of Nigeria who go to Eritrea as it occurred among troops from the Belgian Congo stationed in Nigeria during the war. Lastly malaria may be introduced as a result of development work agricultural projects irrigation road building etc. The establishment of large scale rice cultivation projects for instance has brought about a temporary increase of malaria in parts of West Africa.

The conference drew the attention of the public works departments to the dangers of spreading malaria attendant on development work. Any irrigation schemes or rice growing projects should be planned and supervised with the technical co-operation of the health authorities "in order to avoid the creation of actual or potential breeding places for mosquitos.

## Malaria Control

### *Hyperendemic malaria and immunity*

As stated at the beginning of this article the question of the advisability of malaria control in hyperendemic areas was one of the main questions on which the conference had to take a decision. Two different conceptions were presented.

According to the first which might be called non interventionist hyperendemicity due to the uninterrupted transmission of the infection throughout the year produces a state of immunity in the adult population which is shown by a high degree of resistance to re-infection. In the presence of this intensity of infection a number of infants less than one year old die in the absence of treatment. Those who survive are generally immune. It is difficult to ascertain whether the development of children is seriously impeded by this disease. This hardly seems to be the case for infantile mortality may be due to many other causes. It is feared that as a result of treatment and diminution in the degree of infection populations may lose their immunity and thus be at the mercy of an outbreak of the disease in the event of a slackening of detective measures.

According to the other conception—interventionist—malaria occurs in all degrees of endemicity from sporadic infection to perennial superinfection. A high endemicity certainly results in the development of a resistance by those long exposed to it but before this resistance is attained children suffer and many of them die. The acquisition of resistance by

However, as the experts have emphasized, it is essential to have morbidity and mortality statistics for immune groups on the one hand and for non immune groups on the other so that health administrations can determine the factors implicated in malarial endemicity and have a means of estimating the results to be expected from future campaigns

### Malaria as an Obstacle to the Development of Africa

In the absence of precise information it is hardly possible to estimate the damage which malaria causes among African peoples and its influence on industrial and agricultural production, education of children and social welfare in general. But the obvious improvement brought about in countries where systematic campaigns have begun makes it possible to estimate by comparison the losses caused by this disease to the economy of the continent. In the report which Dr F J C Cambournac submitted to the conference he points to the substantial advantages obtained in the Transvaal and in Natal as a result of malaria control campaigns

before the campaigns 30 40 % more workers than necessary were recruited on the great sugar cane and other plantations in order to leave a margin for absenteeism on account of sickness whereas today, with the disappearance of malaria, only the necessary number is recruited, thus effecting a gain of at least 30 % In the region of Letaba one of the richest on the continent there are now 12,000 acres of irrigated land whereas in 1940 there were only 700 some idea of the improvement effected in the country may be gathered from the fact that the total annual revenues for Tzaneen have increased from about 1,250 units in 1937 to 12,600 in 1949'

### *Movements of population*

If one accepts that the movement of populations and the displacement of workers within the continent are closely linked with the economic progress of Africa then it follows that malaria can exert a prejudicial effect on this development. It is beyond doubt that migrations and 'malaria' are two closely interrelated factors

On the one hand malaria can be introduced by infected persons into an area where it was previously unknown and take epidemic form there when the vector anopheles exist in sufficient numbers. This is the case in the dry south west regions of Africa. In Ruanda Urundi malaria appears to have been introduced by the troops during the 1914 18 war. Towards the end of the XIXth century the coastal populations of Madagascar establishing themselves in the interior of the island imported the disease into regions where it was previously unknown

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According to the other conception—interventionist—malaria occurs in all degrees of endemicity from sporadic infection to perennial superinfection. A high endemicity certainly results in the development of a resistance by those long exposed to it but before this resistance is attained children suffer and many of them die. The acquisition of resistance by

adults reflects suffering in young people and does not represent the attainment of wellbeing by the population as a whole, on the contrary, there is considerable evidence of definite damage inflicted on the community. Hyperendemicity does not, as is often thought, result in a kind of commensalism between the parasite and man, in reality, hyperendemic malaria leads to a very high degree of morbidity and mortality, without counting other costs such as restriction of movement, interference with education and retarded physical development. It is desirable, therefore, for the wellbeing of the people that the transmission of malaria should be terminated by appropriate control methods, whatever the degree of endemicity.

After long discussions on the question, the conference decided in favour of antimalarial intervention by modern methods, whatever the original degree of endemicity and without awaiting the outcome of further experiments. Recommendations to governments were formulated to this effect. The conference pointed out that "the higher the degree of endemicity the more important it is to establish a malaria control organization." To meet the objection as to the risk of re-infecting populations which as a result of control had lost their immunity, the conference considered that should 'an outbreak (of malaria) occur it would be possible to control it by the use of insecticides and antimalarial drugs with reasonable speed avoiding undue suffering by the people.

#### *Action of residual insecticides on A. gambiae*

In view of the favourable results of the malaria control campaigns, in particular against the vector *A. gambiae*, in several regions of Africa the conference was of the opinion that it was possible to bring about a very large reduction in the transmission of *gambiae* malaria by the application of residual insecticides in human habitations and other mosquito shelters using the gamma isomer of benzene hexachloride (BHC) at a dosage of 10 mg per square foot every three months or DDT at a dosage of 200 mg of the para para product per square foot every six months.

#### **Other Considerations**

The conference also discussed the relative value of the various methods of control, including chemotherapy, the efficacy of the main insecticides or mixtures of these products and that of the various drugs used in Africa. It also studied the experiments on vector species eradication in the absence of natural barriers with particular attention to the experiment in progress at Ilaro (Nigeria). The conference prepared a list of research investigations which should be carried out in the various malarial regions of Africa. Recommendations were also made and appeared in the report on training of staff, fellowships and the organization of international courses on malariology in Africa.

## 1950 YEAR OF CO-OPERATION

## Annual Report of the Director-General

The second full year of WHO's activities was marked by an increased emphasis on the Organization's role as a co-ordinating agency in international health work. Programmes of technical assistance for economic development called for co-operation with the United Nations and other international organizations as well as with the individual countries concerned. Decentralization which tended to direct attention to *all* of a region's needs also made co-operative efforts essential. WHO assumed technical responsibility for projects which would have been quite impossible within the limits of its own budget. More and more its task became one of assisting governments to assess their health needs and plan programmes to meet them taking into consideration the pace at which improvements could be absorbed and the aid which might be available from various sources. The guiding policy of the Organization's operations began gradually to change from concentration on priority problems—such as malaria, tuberculosis and venereal diseases—to an attempt to fit health conditions into a framework of a country's social and economic needs and helping governments to develop adequate public health services and to train personnel for these services gained new significance as functions of WHO.

These developments were called to the attention of the Organization in a statement made by the Director-General to the Standing Committee on Administration and Finance in January 1951<sup>1</sup>. Further reference is made to them in the annual report of the Director-General which reviews the work of WHO for 1950.

## Control of Diseases

*Malaria*

Efforts to eradicate malaria continued to play an important part in the Organization's activities. At the end of the year nine malaria-control demonstration teams were in operation: four in India and one each in Afghanistan, Cambodia, Pakistan, Thailand and Viet Nam. UNICEF collaborated in the projects in India, Pakistan and Thailand. These demonstration projects served as training centres for local personnel so that the work might be carried on after WHO aid is withdrawn. In some instances WHO operations stimulated governments to initiate parallel programmes of their own. The demonstration teams also assisted in other health pro-



jects for example a kala azar survey and treatment programme was undertaken in Pakistan and public health nurses attached to the teams engaged in maternal and health activities

**FIG 2 MALARIA CONTROL** A spraying squad in Orissa India receives instruction from the leader of a WHO/UNICEF malaria control team in the proper method of mixing DDT solution and in the use of spraying equipment



Consultants visited numerous countries to advise on malaria problems and to lecture at medical centres. Expert advice was also supplied through meetings of expert committees—the Expert Committee on Malaria<sup>3</sup> and

the Expert Committee on Insecticides<sup>4</sup> Malaria in Equatorial Africa was given special consideration at a conference held at Kampala Uganda under the joint auspices of WHO and the Commission for Technical Co operation in Africa South of the Sahara<sup>5</sup>

Close collaboration was maintained with UNICEF FAO and the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWAPNE) all of which participated in projects with WHO

**FIG 3 TUBERCULOSIS CONTROL** In a district of Petiala India the local language text of a BCG campaign poster is translated for the benefit of the Danish doctor



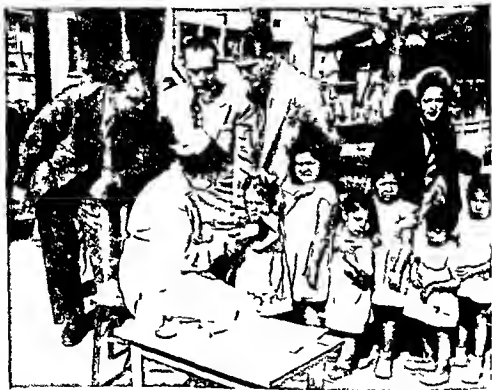
### *Tuberculosis*

Two significant developments were noted in WHO's work in tuberculosis during 1950 a considerable expansion of regional activities and the decision of the Joint Enterprise to wind up its field operations in the BCG vaccination campaigns by the end of June 1951 which meant that WHO had to begin to make provisions for continuing some of the services alone

after that date. During the year two regional advisers were appointed, one for South East Asia and another for the Western Pacific.

Field activities included (1) establishment of demonstration and training centres in El Salvador and Turkey and of a BCG laboratory in Mexico, (2) BCG campaigns, or other types of tuberculosis-control assistance in numerous countries of the Americas, South East Asia, the Eastern Mediterranean and the Western Pacific, (3) a survey of the incidence of tuberculosis in French Somaliland, (4) assistance in nursing

**FIG 4 BCG WORK IN MEXICO** The chief nurse of the BCG Institute of Mexico inoculates a child at a Government nursery home



of tuberculous patients in China, (5) expert advice on the organization of nursing services to Greece on BCG vaccination to Ireland and on streptomycin therapy or the use of x ray and laboratory supplies to Austria, Bulgaria, Czechoslovakia, Finland, Greece, Italy, Poland and Yugoslavia, (6) provision of x ray equipment for Monaco.

Guidance in the Organization's activities in connexion with tuberculosis was given by the Expert Committee on Tuberculosis which met in September.\*

### *Venereal diseases*

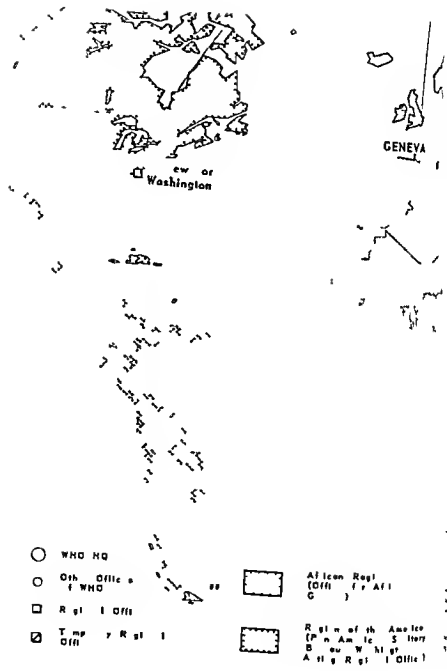
WHO's efforts to control syphilis and other treponematoses were continued consolidated and expanded during 1950. Consultant services were made available to 15 countries. The demonstration team at Simla (India) was in its second year of operations and tried to finish the demonstration phase of its work and to arrange for the training phase to be incorporated into the permanent public health services of the country.

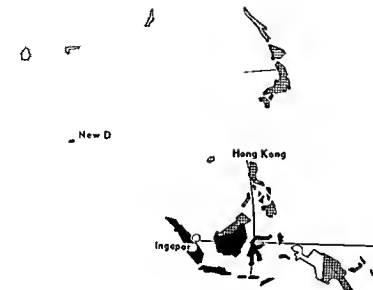
**FIG 5 YAWS CAMPAIGN HAITI** Patients' names are inscribed and their case histories recorded by the nurse



In collaboration with UNICEF mass treponematoses-control projects were initiated in Haiti, Indonesia, Iraq, and Thailand, an estimated 300 000 persons being treated during the year. A control programme was launched in Ecuador, and a project which included maternal and child health activities as well as venereal disease control was undertaken in Afghanistan. WHO provided technical supervision, and UNICEF supplies for campaigns in Bulgaria, Czechoslovakia, Finland, Hungary, Poland, and Yugoslavia. Prenatal and congenital syphilis were emphasized in programmes in Italy and Greece. The problem of venereal disease among merchant seamen received special attention. WHO assisted in the formation of the Inter

FIG 6 REGIONS AND OFFICES





A I R g l  
 R g l  
 Offi  
 G )  
 M d i r e



W i P III  
R g l



Th g l w h h  
III d b II i d

national Anti venereal disease Commission of the Rhine and prepared the *International List of Venereal disease Treatment Centres at Ports* and an individual treatment record booklet for the use of seamen

The laboratory aspects of venereal-disease problems were given considerable emphasis guidance being supplied by the Subcommittee on Serology and Laboratory Aspects of the Expert Committee on Venereal Infections<sup>7</sup> Demonstrations on penicillin therapy and on cardiolipin antigens were presented at several university and medical centres in Europe and the Eastern Mediterranean Region including the Statens Seruminstitut in Copenhagen Most important was the establishment of the International

FIG 7 TRACHOMA CONTROL An eye clinic in the UNRWAPRNE camp at Jericho



Treponematoses Laboratory Centre at the School of Hygiene and Public Health of Johns Hopkins University Baltimore Md USA, where basic research studies are being conducted Also noteworthy were international symposia on venereal diseases which were held in Helsinki and in Paris<sup>8</sup>

#### *Other communicable diseases*

Activities relative to other communicable diseases took the form chiefly of aid to research projects and provision of the services of consultants A grant was made to the Indian Council of Medical Research for studies

<sup>7</sup> *World Health Organization Report* 5 1951 33  
Ch on *World Health Organization* 1951 5 9

on cholera the World Influenza Centre London continued and extended its work, with the aid of WHO influenza centres whose number increased during the year to 34 in collaboration with FAO and with financial aid from UNICEF WHO established 12 brucellosis centres in various parts of the world to study the epidemiology epizootiology diagnosis treatment and prevention of this disease and research centres were set up to study other diseases e.g. an antibiotics research and training centre in Rome and international salmonella centres in different countries Studies were initiated on plague cholera rickettsioses yellow fever bilharziasis polio myelitis smallpox (dried vaccines) and trachoma

Consultants assisted Afghanistan in combating typhus UNRWAPRNE in measures against bilharziasis and trachoma Ceylon India and the Maldive Islands in campaigns against filariasis Pakistan in controlling kala azar Chile and Colombia in vaccination campaigns against diphtheria and whooping cough Ethiopia and Italy in the treatment of leprosy Turkey in the production of biological products for the control of anthrax and various countries in dealing with problems relative to the other zoonoses Teams were provided for India Chile and Peru and a consultant sent to the United Kingdom to aid in the treatment and rehabilitation of victims of poliomyelitis A WHO sponsored project against rabies in Israel served as a research as well as control demonstration in its use of a new e.g. propagated rabies vaccine

Technical direction in many of these activities was provided by expert groups which met under the aegis of WHO and other international organizations

### Organization of Public health Services

WHO's fundamental objective is to strengthen the health services of Member Governments To aid in achieving this objective the Organization during 1950 centralized in one division of the Secretariat—called the Organization of Public health Services—activities relative to public health administration maternal and child health nutrition environmental sanitation nursing health education of the public mental health and social and occupational health

#### *Public health administration*

Regional advisers and consultants visited many countries during the year to make health surveys and to discuss public health services with government authorities Advice on hospital facilities and projects was given in Costa Rica Luxembourg and Surinam consultants advised Liberia on public health problems surveys of health services were made in Lebanon and Syria and a consultant visited Finland to report on the working and results of the national health service in the United Kingdom



Public health administrators were provided for joint projects with other agencies with UNESCO for a project in Haiti, with UNRWAPRNE for Palestine refugee relief activities and with the United Nations for emergency aid to Korea. The Technical Assistance Programme increased the demand for public health administrators, plans for health demonstration areas were drawn up for implementation under this Programme during 1951.

### *Maternal and child health*

WHO maternal and child health work increased considerably in 1950. Full time regional advisers were appointed for the Eastern Mediterranean Region, for the Americas and for the Temporary Office for the Western Pacific—adding to those already serving the Special Office for Europe and the Region for South East Asia.

During the last two years WHO has co-operated with UNICEF in more than a hundred maternal and child health projects—in addition to the BCG and nutrition programmes—in more than 40 countries. 50% in Europe, 16% in South East Asia, 14% in the Americas, and 10% in the Eastern Mediterranean and Western Pacific Regions. The demonstration team which started work in India in 1949 broadened its activities in 1950 into a combined rural and urban health training centre for workers in maternal and child health. Similar training projects were launched in Afghanistan, Pakistan and the Philippines. Paediatricians or paediatric nurses were assigned to teams in other fields—venereal diseases in Burma and Indonesia and malaria in India and Thailand. Consultants made special studies, or gave advice on maternal and child health projects in Brazil, Chile, Colombia, Finland and the United Kingdom.

Prematurity was studied by an expert group<sup>9</sup> and programmes on the care of premature infants were worked out for Bulgaria, Czechoslovakia, Finland, France, Poland and Yugoslavia. The health of school age children was also the subject of study by an expert group<sup>10</sup> and advice on the improvement of school health services was supplied to various countries.

WHO participated in studies of the United Nations on juvenile delinquency and on the needs of homeless children and assisted the United Nations and UNICEF in rehabilitation programmes for physically handicapped children. Expert aid was given to IRO on problems relative to children in camps for displaced persons.

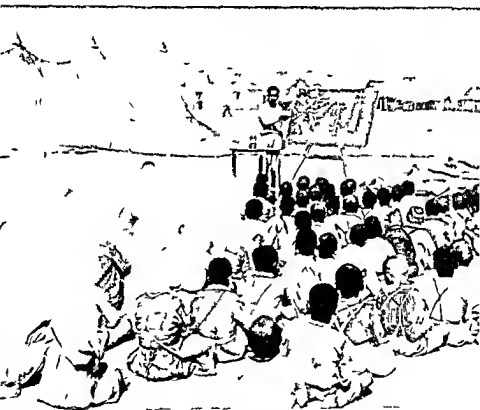
### *Environmental sanitation*

A section on environmental sanitation was established in the Secretariat in February 1950 to supervise sanitation activities many of which are

related to disease-control projects. Three regional offices now have advisers on environmental sanitation.

During the year sanitary engineers attached to malaria control demonstration teams aided governments in dealing with other environmental sanitation problems. Water supply and milk sanitation were problems

**FIG 8 CAMP SANITATION** A lesson on how flies breed in one of the refugee camps in Palestine



which received special attention. Advisory services were supplied to Liberia and to UNRWAPRNE and sanitary engineers were recruited for relief teams in Korea.

#### *Social and occupational health*

Another section in the Secretariat which was newly established in 1950 was that on social and occupational health. Most of the Organization's activities with regard to this subject were integrated with those in other

fields and, in many instances, were dependent upon co operation with ILO and other international agencies

### *Mental health*

Two expert groups on mental health met during 1950 the Expert Committee on Mental Health<sup>11</sup> and its Subcommittee on Alcoholism. Studies were undertaken by WHO on projects sponsored by the United Nations one on the effects of deprivation of maternal care on mental health<sup>12</sup> a second on juvenile delinquency,<sup>13</sup> and a third on rehabilitation in psychiatry WHO also contributed to the development of the International Children's Centre in Paris and gave advice on UNICEF programmes relative to juvenile epilepsy and to child guidance and welfare Consultants visited Finland Ireland, Italy, Norway, the Philippines, Sweden, and Yugoslavia to give expert assistance in dealing with mental health problems.

### *Nutrition*

One of the nutritional problems studied by WHO in 1950 was that of endemic goitre Surveys of its incidence were made in Brazil, Ceylon Colombia Ecuador Guatemala and Mexico Consultants from FAO and WHO also made a survey of kwashiorkor a nutritional disorder common in tropical and subtropical areas

In collaboration with FAO WHO undertook a study of nutrition in Egypt and organized a training course there for participants from the Eastern Mediterranean countries Nutritional facilities in Yugoslavia were also investigated and assistance given in establishing institutes in Zagreb and Sarajevo A consultant helped to set up a training course in hospital dietetics in India, and lecturers gave short courses at the Institute of Nutrition of Central America and Panama Seminars on infant metabolism were held under the aegis of WHO at Leyden and at Stockholm<sup>14</sup>

### *Nursing*

Direction in WHO nursing activities was supplied by the Expert Committee on Nursing which met in February 1950<sup>15</sup> During the year public-health nurses continued to work with demonstration teams in various parts of the world giving particular attention to maternal and child health A nurse was assigned to the tuberculosis demonstration centre in Istanbul

<sup>11</sup> World Hlth Org. techn. Rep. 5 1951 31

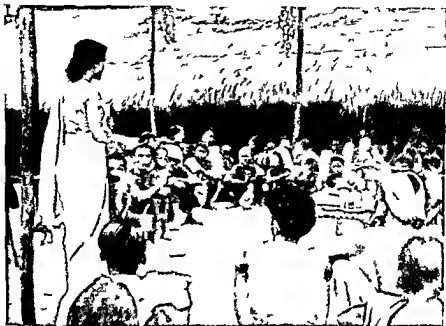
Bowlby J (1951) *Maternal care and mental health* Geneva (World Health Organization Monograph Series No. 2)

Bovet, L. (1951) *Psychiatric aspects of juvenile delinquency* Geneva (World Health Organization Monograph Series No. 1)

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<sup>12</sup> World Hlth Org. techn. Rep. Ser. 1950 24

**FIG 9 AN INDIAN PUBLIC HEALTH NURSE** member of a WHO/UNICEF malaria control team explains to villagers how DDT spraying will benefit their health



to set up nursing operations and organize teaching programmes. Paediatric and public health nurses served in UNICEF and WHO projects in Brunei, Malaya, North Borneo and Sarawak. A two week working conference on nursing was held in Leyden in October to discuss, among other subjects, methods and techniques in health education.

#### *Health education of the public*

During 1950 WHO supplied to requesting countries information on various aspects of health education. Assistance was given to Sweden in a survey of health education. Health educators were assigned to the demonstration project in venereal diseases in Simla, India, to the joint UNICEF/WHO teacher training demonstration in Sarawak, to the UNESCO project in fundamental education in Haiti, and to a UNESCO team conducting an investigation of fundamental educational needs in the Arab States.

A special consultant advised on the social and cultural aspects of the Organization's health education programme and two health education specialists were engaged—one for the Regional Office for the Americas and the other for the Special Office for Europe.

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*World Hlth Org techn Rep Ser* 1951 31

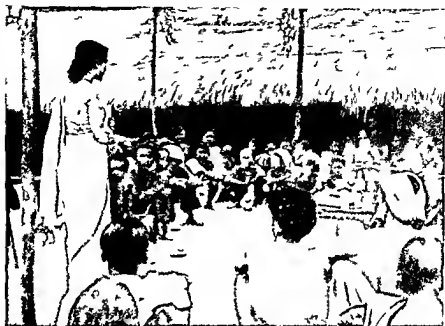
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A special consultant advised on the social and cultural aspects of the Organization's health education programme and two health education specialists were engaged—one for the Regional Office for the Americas and the other for the Special Office for Europe.

## Professional and Technical Education

The training of doctors, nurses and other health personnel continued to be one of WHO's most important concerns and will be the subject of a thorough technical discussion at the Fourth Health Assembly. Information on many phases of medical education was collected and disseminated during the year. Co-operation was maintained with the World Medical Association and with other international organizations. Consultants conferred with health authorities of several countries—Egypt, France, Greece, India, Lebanon, the Netherlands, the Scandinavian countries and Switzerland—on problems of training facilities and needs. WHO assisted Member Governments directly by (1) helping to organize, or sponsoring courses and seminars, and providing lecturers and teachers for them, (2) utilizing other WHO activities as training grounds e.g. demonstration projects served as centres for instructing different types of personnel, (3) awarding and administering an increasing number of fellowships, and (4) providing medical literature and teaching equipment.

### *Fellowships*

New developments in the WHO fellowship programme included team training (group training courses, symposia, seminars, study groups, etc.) for which short term fellowships were awarded. An increasing number of fellowships in nursing and sanitary engineering grants for undergraduate study to Fellows from countries lacking medical training facilities e.g., Albania and Ethiopia. Administering fellowships available under the technical assistance programmes in addition to those awarded by WHO and UNICEF and transfer of much of the responsibility for fellowships from Headquarters to the regions. Follow up studies of Fellows who had completed their training revealed that nearly all ex-Fellows were employed in government or government sponsored services which gave some indication of the value of this function of the Organization.

### Other Activities

In addition to the foregoing, the Director General's report reviews other activities of the Organization: the study of methods and facilities for the production of antibiotics,<sup>18</sup> encouraging the free flow of insecticides and essential drugs—antibiotics, antimalarials, etc. special health services, such as those in co-operation with UNRWAPRNE and with the United Nations in aid to Korea; administration of the International Sanitary Conventions and preparation of the draft International Sanitary

Regulations <sup>17</sup> dealing with problems of health statistics <sup>18</sup> establishing standards for biological products <sup>19</sup> the unification of pharmacopoeias <sup>20</sup> the work of the Tuberculosis Research Office in Copenhagen <sup>21</sup> publications library and reference services and public information services Sections in the report are also devoted to technical assistance for economic development in which the background and mechanism of the programme are described and to collaboration with other organizations including the United Nations its specialized agencies and certain inter governmental and non governmental organizations Eighteen annexes supply detailed information on various aspects of the Organization's activities and a supplement gives a summary analysis of reports from Member States

In concluding his introductory remarks the Director General expresses the hope that the report will leave all those who are interested in our work with the reassuring impression that despite many shortcomings due at least in part to youth and lack of sufficient experience despite handicaps resulting from the political divisions which still split the world and despite financial limitations the World Health Organization has been moving in the right direction and that its activities in 1950 are a promise for the future of the world's health

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## INTERNATIONAL STANDARDS AND CONTROL OF DRUGS

During its seventh session held in Geneva from 30 October to 4 November 1950 <sup>1</sup> the report on which has been published as No 35 in *World Health Organization Technical Report Series* the Expert Com

The following table shows

Members

- D H B g e e a d Rasm P f o f Org n c Ch m stry R yal D n h School of Pharm y
- Cop h g De m k M mb f th D n h Ph rm c poe Comm ss n
- D E Full rton Cook formerly Ch rm Committee f R o of th Ph rm poe f th Unit d
- St tes of Am n N w Y k NY USA
- D I R Fahmy P f or of Pharm g o y f M d F ad I U rsty C Egypt
- Sec tary Egypt Ph rm poe C mm
- D H Fl k Pr fesse d Ph rm cognos a l Ecol P lytech q Fédé l Zuri h Swt z l d
- M mb de l C mm s n Fédé l d l Ph m copé
- D C H Hamp h form ly Sec t y Brit h Ph mac poe C mmus G ral M d cal Co l
- Office Lo d U ted Kingd m (Ch m )
- D R H za d Pr f d Ph m colog t d M té méd l a l F culté d Méd d I U
- rs té de P F M mb d l C mm d ta Ph rm ac pé f nç se (Pl CH i m )
- Dr C H y ns Pr fesse f Ph rm l gy d T ol gy U rsty ol Gh t Belg m
- D D n O P f f Ph rm y d T l gy Uni rsty f G nu s N the lands Ch rm
- N th l d Ph mac poe a C mm s o

S tary

P Bl Ch f Ph rm ce tual S tion, WHO



mittee on the Unification of Pharmacopoeias examined a certain number of draft monographs and appendices which will figure in volume II of the first edition of the *Pharmacopoea Internationalis* (Ph I). The committee also studied the question of international non proprietary names for drugs and the legal protection of such non proprietary names, and suggested that a conference on the control of drugs be convened.

## Pharmacopoea Internationalis, Volume II

Volume II of the *Pharmacopoea Internationalis* will contain monographs on injections, tablets, and tinctures of a great number of the substances figuring in volume I. It will also include descriptions of vitamin B<sub>1</sub> and of several antibiotics, antimalarial drugs and synthetic analgesics and appendices on the biological assay of certain antibiotics, the pyrogen test, the standards for cardiolipin and purified lecithin used in the preparation of antigens for the serodiagnosis of syphilis and the table of usual doses of drugs for children. The committee examined the greater part of some two hundred draft monographs and appendices, several of which were established in collaboration with the Expert Committee on Biological Standardization.

## Non proprietary Names for Drugs

The answers received from various Member States to the WHO circular letter submitting general principles for a system of non proprietary names were examined in detail. Nineteen countries raised no objection to these general principles and six countries suggested certain modifications. Consideration of the legal basis to be given to the project led to a recommendation that WHO examine the possibility of establishing appropriate regulations which make possible the rapid verification of existing names already protected and the effective legal protection of non proprietary names selected by the Expert Committee on the Unification of Pharmacopoeias.

The Subcommittee on Non Proprietary Names<sup>2</sup> at its first session held in Geneva on 6 and 7 November 1950 adopted non proprietary

<sup>2</sup> The following took part in this session:

### Members

- Or H. Baggesgaard Rasmussen, Professor of Organic Chemistry, Royal Danish School of Pharmacy, Copenhagen, Denmark. Member of the Danish Pharmacopoeia Commission.
- Or C. H. Hampshire, formerly Secretary, British Pharmacopoeia Commission, General Medical Council Office, London, United Kingdom (*Ch. Irman*).
- Or R. Hazard, Professeur de Pharmacologie et de Matière médicale à la Faculté de Médecine de l'Université de Paris, France. Membre de la Commission de la Pharmacopée française (*Ice-Chai man*).

### Secretary

P. Blanc, Chief, Pharmaceutical Section, WHO.

The report on the first session of this subcommittee is included in *World Health Organ. Rep. Ser.* 1951, 35.

names for about 40 substances which will figure in volume II. These non proprietary names—in Latin, English and French—are mentioned in the report.

### Control of Drugs

Several Member States have already sent in their replies to the questionnaire circulated by WHO for the purpose of obtaining information on national pharmacopoeias and the methods employed for the control of drugs in the various countries. In order to encourage the exchange of information and the co-operation of health authorities of Member States on this question, the committee recommended that a conference on the control of drugs be held in 1952 or 1953 under the auspices of WHO. The object of the conference would be to consider the advantages of more uniform methods for the control of drugs in the various countries in the interests of health and international commerce and to make recommendations on the best methods for the control of drugs.

## Notes and News

### Tuberculosis

#### *Istanbul Tuberculosis Centre*

A recent report from Istanbul revealed that as of 1 April 1951, 1,202 persons had benefited from training at the WHO Tuberculosis Control Demonstration and Training Centre. Included in this number were 322 doctors and 367 nurses, the rest being laboratory and x-ray technicians, social workers and related personnel.

As a result of a systematic survey conducted at the Centre, attention was called to the prevalence of tuberculosis among university students. Radiological examination of newly registered university students has been made compulsory. From November 1950 to January 1951, more than 2,000 students were examined at the Centre and the rate of active tuberculosis was found to be 20 per 1,000.

Announcement has been made of a medico-social training course in tuberculosis which will be given at the Centre from 1 May to 15 June. This course, which is open to any doctor in Turkey, will include five series of lectures covering: (1) the causes and prevention of tuberculosis; (2) the diagnosis of tuberculosis; (3) the treatment of tuberculosis; (4) modern antituberculosis facilities; and (5) the social aspects of tuberculosis and tuberculosis control in the world. In addition to the lectures, technical demonstrations and clinical instruction will be given. Further information may be obtained from Dr. E. Berthet, WHO Tuberculosis Consultant at the Centre.

#### *Austria*

An extension of antituberculosis activities with UNICEF aid is under consideration in Austria, where mortality from the disease is estimated at 90 per 100,000. In the city

of Vienna mass x ray surveys have revealed about 7 suspect cases in every 1 000 examined and there are 8 000 open cases in the dispensary registers

An intensive BCG campaign was undertaken in 1948 with the help of the Danish and Swedish Red Cross Societies in 1949 with the co operation of the International Tuberculosis Campaign the project was expanded By July 1950 700 000 children had been examined and 500 000 vaccinated

The Austrian Government has developed a general programme of tuberculosis control which will include BCG vaccination establishment and enlargement of central dispensaries in each province extension of treatment facilities and a scheme for rehabilitation UNICEF has been asked to help or is already helping along the following lines

- 1 Strengthening the laboratories in the provinces and expanding diagnostic facilities in Vienna

- 2 Providing laboratory supplies for BCG production

- 3 Providing x ray equipment in order to facilitate early diagnosis and to make possible the examination of nearly 100 000 children per year

- 4 Providing funds for early case finding and follow up work in the industrial and semirural area of Styria

## Nursing

### *WHO nursing staff*

WHO's nursing staff now numbers 41 distribution by regions being as follows South East Asia 16 Western Pacific, 14 Eastern Mediterranean 7 the Americas 2 (not counting those engaged by PASB alone) Headquarters 2 These nurses represent many nationalities and are serving in WHO projects of many types their role being that of instructor as well as of assistant in clinical activities

### *Republic of the Philippines*

Public health nurses who are already employed in the health services have been the first to receive special training in the rural health demonstration and training project which has been launched in the Philippines.<sup>1</sup> The two month course planned with the aid of the Educational Section of the Filipino Nurses Association included in addition to technical demonstrations and practical field experience lectures on subjects such as public health administration public health nursing maternal care child care school nursing hygiene and sanitation nutrition and vital statistics Miss W Visscher is the WHO nurse assisting in this project

## Venereal Diseases and Treponematoses

### *Ecuador*

An experimental project in syphilis-control has been undertaken in Ecuador The plans call for an 8 month campaign to treat syphilis in a population group of 5 000 to 6 000 persons between the ages of 15 and 50 years using procaine penicillin in oil and aluminium monostearate (PAM) as the therapeutic agent The project will also entail a statistical evaluation of the results the training of local professional and auxiliary personnel and the determination of costs of a programme of this kind so that it can be compared with orthodox venereal-disease campaigns The Ministry of Social Welfare

Health and Hygiene is furnishing local personnel equipment physical facilities and supplies WHO and the Pan American Sanitary Bureau are providing penicillin cardio lipin antigen and the services of a medical officer and a consultant serologist Dr C Rodriguez is the venereologist in charge and Miss G Stout the serologist

### *Egypt*

Tanta Egypt is the headquarters of an anti venereal-disease project to which WHO is lending assistance Dr M P V Tottie venereal-disease-control officer of the Royal Swedish Medical Board has been named chief medical adviser WHO is also supplying the services of a serologist a public health nurse and a health programme specialist For each of these team members the Egyptian Government plans to provide a second so that there will be an equal number of international and Egyptian personnel The project is also truly a joint one with regard to provision of supplies WHO contributing \$40 000 worth of penicillin and laboratory equipment and the Egyptian Government equipping a clinic at the Tanta hospital for the use of the demonstration team

The demonstration project will also serve as a training centre for venereologists from other parts of Egypt and eventually from other countries of the Eastern Mediterranean Region WHO plans to participate in these anti venereal disease activities for two years after which the Egyptian personnel will take over

### *Iraq*

The UNICEF/WHO project for the control of bejel and syphilis in Iraq which was initiated in October 1950<sup>1</sup> is reported to be progressing most satisfactorily A building to accommodate a laboratory and clinic for the project is nearing completion in Baghdad A mobile demonstration team headed by Dr E H Hudson is winding up the first intensive survey in rural areas During January and February 1951 about 1 200 patients were examined and blood samples taken and sent to Baghdad for testing Over 200 infected patients were given penicillin treatment which Dr Hudson believes will reduce the incidence of bejel almost immediately as the infectiousness of "open cases" is reduced

Concomitant with field operations are the research activities being carried on by the Baghdad laboratory Strains of typical syphilis spirochaetes have been sent by the laboratory to the Medical School at Johns Hopkins University Baltimore Md USA for comparison with similar strains from other parts of the world Strains of bejel yaws and other treponematoses will also be sent to Johns Hopkins for comparative studies

### *Haiti*

It was recently reported that up to 21 February 1951 276 923 persons had received penicillin treatment in the campaign against yaws which is part of the United Nations Mission to Haiti<sup>2</sup> Of this number 141 825 showed clinical manifestations of the disease Treatment has been given to inhabitants in 1 015 communities and is expected to reach those in 133 more There are 19 treatment units working in the Département du Sud and eight control units in the Département du Nord and de l'Artibonite where mass treatment operations have been completed At yaws clinics held twice a week in a recently opened dispensary several hundred patients are under observation all infectious cases are followed by complete physical examination and dark field and serological tests and non infectious cases are also given a complete physical examination

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<sup>1</sup> *Chron World Hlth Org* 1950 4 355



# CHRONICLE OF THE WORLD HEALTH ORGANIZATION

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*Symposia published*

Publication of the papers and discussions from the international symposia on syphilis which were held in September and October 1950 in Paris and Helsinki<sup>1</sup> has been announced. The French version has appeared in the October, November and December (1950) issues of *Prophylaxie antivenérienne* and the English in a special supplement to *Acta Dermato Venereologica Scandinavica* (1951 Vol. 31 Supplementum 24).

**French Document on WHO**

Under date 17 January 1951 *La Documentation Française* in its series entitled *Notes et Etudes Documentaires* (No. 1421) published a 79 page report on WHO—its structure, functions and activities from 1946 to 1950.

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<sup>1</sup> *Chron. World Health Org.* 1951 5:9

# BACKGROUND TO THE INTERNATIONAL SANITARY REGULATIONS

DR P DOROLLE

*Speech by the Deputy Director  
General of WHO at the opening meeting  
of the Special Committee set up to  
consider the Draft International Sanitary  
Regulations 9 April 1951*

The meeting here today of the special committee which you constitute is undoubtedly a significant event in the history of international sanitary regulations

A chance which I consider as a happy augury has timed your committee meeting to take place precisely in the centenary anniversary year of the first attempt on the international level to establish an agreement for the purpose of limiting the spread of pestilential diseases

Although your distant predecessors of 1851 in Paris had not the satisfaction of seeing their work brought to a successful conclusion and although 40 years of continuous effort in numerous conferences were necessary before the establishment in Venice in 1892 of the first international convention nevertheless their faith and persistence furnish us at least with an example worthy to be followed the first step had been made the idea had taken shape I will not recall in detail the long history of international sanitary conventions but we should be lacking in due respect and gratitude if we did not at least mark the milestones along the road 1894—the first sanitary conference on the Mecca Pilgrimage 1902—the setting up in Washington of the Pan American Sanitary Bureau whose fiftieth anniversary we shall be celebrating next year 1903—the agreement signed in Paris the resolutions of which adopted in the 1907 Rome Agreement were to lead to the birth in 1909 of the Office International d'Hygiène Publique These two institutions by giving a concrete form to international collaboration were destined to facilitate later conferences In 1905 the Pan American Sanitary Convention appeared In 1912 after a conference held in Paris a great international convention emerged In 1924 the Pan American Sanitary Code made its first appearance In 1926 thanks to the efforts of the Office International d'Hygiène Publique an international sanitary convention was signed by 66 nations and ratified by 44 1933 saw the establishment of the International Sanitary Convention for Aerial Navigation made necessary by the development of this new means of transport In 1944 under the auspices of UNRRA another convention amended that of 1926 on maritime traffic and that of 1933 on aerial navigation



## RECENT AND FORTHCOMING MEETINGS

### 1950

- 29 November WHO Expert Committee on International Epidemiology and Quarantine Legal Subcommittee third session Geneva
- 6-7 November WHO Expert Committee on the Unification of Pharmacopoeias Subcommittee on Non Proprietary Names first session Geneva
- 6-11 November WHO Expert Committee on Biological Standardization fourth session Geneva
- 6-13 November FAO/WHO Expert Panel on Brucellosis first session Washington
- 27 November Commission for Technical Co-operation in Africa WHO Malaria Conference in Equatorial Africa Kampala Uganda
- 9 December
- 11-12 December Preparatory Working Group on a Public Health Administration Seminar Geneva
- 11-16 December WHO Expert Committee on Malaria fourth session Kampala Uganda
- 11-16 December WHO Expert Committee on Mental Health Subcommittee on Alcoholism first session Geneva
- 11-16 December Joint WHO/FAO Expert Group on Zoonoses first session Geneva

### 1951

- 8-30 January WHO Executive Board Standing Committee on Administration and Finance Geneva
- 22 January WHO Executive Board seventh session Geneva
- 5 February
- 30 January Léon Bernard Foundation Committee Geneva
- 9 April-4 May WHO Special Committee to consider the Draft International Sanitary Regulations prepared by the Expert Committee on International Epidemiology and Quarantine Geneva
- 10-17 April Joint FAO/WHO Expert Committee on Nutrition second session Rome
- 19-28 April WHO Expert Committee on the International Pharmacopoeia eighth session Geneva
- 30 April-1 May WHO Expert Committee on the International Pharmacopoeia Subcommittee on Non Proprietary Names second session
- 7 May Fourth World Health Assembly Geneva
- 18 May WHO Regional Committee for the Western Pacific first session Geneva
- 28-29 May WHO Consultative Committee for Europe first session Geneva
- 1-16 June WHO Executive Board eighth session Geneva

those regulations which it considers most satisfactory and bring them into force by a simple and automatic procedure but in addition—and this is obvious—it confers on the Assembly the right to modify such regulations in the light of experience gained by a procedure as simple as that for the adoption of the initial regulations themselves

During the first months of its existence the World Health Organization Interim Commission established expert committees entrusted with the task of preparing for the revision or rather for the re framing of the existing sanitary conventions One of these committees was specially concerned with the important question of the sanitary control of the Mecca Pilgrimage Others established jointly with the Office International d Hygiene Publique—the importance of whose role in this field it is impossible to over emphasize—analysed and evaluated the most recent data on the epidemiology of the main pestilential diseases and on modern methods of disinsectization On the basis of this technical documentation the Expert Committee on International Epidemiology and Quarantine viewing the matter from the angle of quarantine practice formulated a series of principles to serve as a basis for the preparation of the new International Sanitary Regulations After the approval of these principles by the Second World Health Assembly the expert committee was given the task with the assistance of the legal subcommittee of drawing up the first draft of the regulations This first draft was submitted for the consideration of governments and of the other interested international organizations The observations comments and suggestions made were studied by the expert committee and its subcommittee during long and patient deliberations during which the draft which we have before us today was established It is by the desire of the Third World Health Assembly—whose special committee you constitute—that you have been called together today Gentlemen to study this text and to give it its final form so that the Fourth World Health Assembly next month may make a decision as to adoption of the regulations

In contrast to what frequently happens in international meetings you have only one working document established in the actual form of the regulations to which it is intended to give birth As I have said this is the result of very lengthy preparatory work the fruit of patient technical investigation and frank opposing of divergent tendencies accompanied always nevertheless by a desire to come to a final understanding This slim document contains the essence of the most authoritative opinions expressed with full knowledge of the facts of the most qualified technical and legal experts of the world revised after critical study on the part of governments and directly interested international bodies which have been without unnecessary delay but also without dangerous haste able to examine the first draft in the light of practical knowledge gained from their own experience

The fact is however that unfortunately, none of these agreements has entirely replaced the previous conventions. Their geographical fields often do not coincide and their objects are not always exactly the same. Above all, since they are diplomatic instruments subject to the formal ratification of signatory States, there are always certain States subscribing to the most recent conventions while others remain as adherents to very old agreements. Thus, at the present time there are simultaneously in force the conventions of 1903, 1912, 1926, 1933, 1944, the Pan American Convention of 1905, the Pan American Sanitary Code of 1924, apart from the 1934 arrangements with regard to bills of health and consular visas. Moreover, in certain countries the internal regulations for the legal application of international conventions have not kept pace with the conventions themselves. The result if I may say so, is that the present situation appears to be chaotic or at least inextricably confused to anyone attempting to analyse it. The fact that more serious difficulties have not arisen is due to the intelligence of sanitary authorities, to the good sense shown by those responsible for the application of the regulations, to the general goodwill of all concerned, and to the mediating influence of the international bodies.

Nevertheless, the necessity of making the international sanitary statutes both uniform and rational has become clear to all. Thus when in July 1946 the Constitution of the World Health Organization was drawn up it was recognized that one of the essential functions of the Organization would be to propose conventions, agreements and regulations and to make recommendations with respect to international health matters. Article 21 of the same Constitution develops this principle by giving to the Health Assembly authority to adopt regulations concerning sanitary and quarantine requirements and other procedures designed to prevent the international spread of disease. In giving to the Health Assembly the power to adopt international sanitary regulations, the founders of the Organization obviously desired to institute a new procedure likely not only to lead to the uniformity generally recognized as necessary but also likely to maintain that measure of flexibility in the new regulations which would make them adaptable to the constantly developing scientific knowledge concerning epidemiology and to the changes in the nature and speed of modern transport. This flexibility could not be obtained with the old diplomatic instruments calling for special meetings of international conferences and subject to the slow and uncertain ratification procedures. It is precisely this defect which Article 22 of the Constitution remedies by providing that the regulations adopted by the Assembly shall enter into force for Member States after simple notification except for those Member States signifying within a certain period either their refusal or their reservations. This happy and somewhat revolutionary formula conferring on the World Health Assembly the power to adopt sanitary regulations on an international level not only makes it possible for the Assembly to adopt

hampering of international traffic which is an essential element in the economic and social life of the world today. In any case I am certain you are all aware that the regulations established by you will be of value only in so far as they are adequately applied. From this point of view the past is a guarantee of the future since in this international field more than in any other each knows that he can generally count on the goodwill of all.

Gentlemen I declare open the session of the Special Committee established by the Third World Health Assembly to consider the Draft International Sanitary Regulations.

## INTERNATIONAL ACTION AGAINST BRUCELLOSIS

We are now in possession of sufficient knowledge and practical experience [in brucellosis] to undertake satisfactory programmes of diagnosis, control and eradication in the various areas of the world.

This was the view expressed by the Joint FAO/WHO Expert Panel on Brucellosis at its first session in Washington from 6 to 13 November 1950.<sup>1</sup>

The following took part in this session:

- D. W. Bruns, Research Bacteriologist, Camp Detrick, Md., USA.  
 D. H. C. B. Roy, Veterinary College, Copenhagen, Denmark.  
 D. B. N. Calhoun, Lieutenant Colonel, US Public Health Service, Bethesda, Md., USA.  
 D. M. R. Castañeda, Major, Research Institute, General Hospital, Mexico (V. Ch. /man).  
 S. W. L. D. Lympl, Chief, Department of Veterinary Medicine, Ministry of Health, London, United Kingdom (Ch. /m).  
 D. R. D. Rust, Institute of Veterinary Pathology, Edinburgh, Scotland.  
 D. S. Elberg, University of California, Berkeley, Calif., USA.  
 Dr. Alice C. Evans, formerly US Public Health Service, 1661 Crescent Place, N.W., Washington, D.C., USA.  
 Dr. H. J. Hens, 20 Fifth Avenue, New York City, N.Y., USA.  
 D. L. M. H. Hens, Department of Veterinary Medicine, University of Lafayette, La., USA.  
 P. M. Jacob, Chief, Maladina Clinic, Saint-Etienne, France.  
 D. I. L. Schlotter, Veterinary Medicine, University of Pennsylvania, Philadelphia, USA.  
 D. N. McCullagh, School of Medicine, University of Chicago, Chicago, Ill., USA.  
 Dr. C. Mañón, Animal Disease Station, US Bureau of Animal Industry, Beltsville, Md., USA.  
 P. M. G. Mazzetti, Director, Institute of Hygiene, Study of Brucella, University of Florence, Italy.  
 Dr. C. K. M. Nelson, US Bureau of Animal Industry, Department of Agriculture, Washington, D.C., USA.  
 D. B. L. M. Nelson, Chief, Brucella Section, Department of Agriculture, Washington, D.C., USA.  
 H. B. Dryden, Bureau of Agriculture, Washington, D.C., USA.  
 Dr. L. Oblat, Head, Medical School, H. Brewin, University of Iowa, Iowa, USA.  
 D. G. P. Cheek, Institute of Oswaldo Cruz, Rio de Janeiro, Brazil.  
 D. G. R. P. Cheek, Institute of Oswaldo Cruz, Rio de Janeiro, Brazil.  
 Dr. M. R. O'Connell, College of Veterinary Medicine, University of Minnesota, St. Paul, Minn., USA.  
 D. B. T. Simms, Chief, US Bureau of Animal Industry, Department of Agriculture, Washington, D.C., USA.  
 Dr. W. W. Spunk, Department of Medicine, University of Minnesota, Minneapolis, Minn., USA.  
 D. A. W. Steel, Chief, Department of Veterinary Medicine, University of New South Wales, Weybridge, Sydney, New South Wales, Australia (R. pp.).  
 D. J. H. Steel, Chief, Veterinary Public Health Division, Communicable Disease Control (US Public Health Service), Atlanta, Ga., USA.  
 D. A. Thomson, Chief, Brucella Department, State Veterinary Serum Laboratory, Copenhagen, Denmark.

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- Dr. M. M. K. P. Veterinary Officer, Department of Epidemiological Services, WHO.  
 Dr. K. V. L. K. Veterinary Chief, Animal Industry Branch, Agriculture Division, FAO.

The text submitted for your examination in which is, of course, embodied a large part of the substance of the older conventions defines the maximal measures which can be imposed on international traffic in order to ensure sanitary protection at frontiers. In many cases it will not be necessary to apply the provisions made (which go to the limit of what can be imposed) in their entirety or even in part. The ultimate aim is, by the proper organization of national health services, to destroy diseases at their source and establish hygienic conditions in which such diseases cannot develop. We cannot hope to attain this end everywhere without very long and persistent effort. In the meantime, let us concentrate on producing the best possible set of regulations.

I spoke just now of the patient and assiduous efforts which have gone to the drawing up of the draft regulations, taking into account always the divergency of opinions concerning the measures necessary for preventing the spread of epidemic scourges. The problem before you is, it seems to me, that of the method to be adopted in order to make the best use of this preliminary work and to emerge as rapidly as possible from the seemingly inextricable confusion presented by the present international sanitary conventions. The word *method* reminds me of that rule laid down by the philosopher Descartes three centuries ago in his 'Discourse on Method'. It is a plain truth that when we cannot discern the indisputably true opinion, we must follow the most probably true. Nothing seems to me more applicable to the present case than the image with which the philosopher illustrates this maxim—that of travellers lost in the forest who must turn neither to the one side nor to the other but walk always as straight as possible in the same direction without deviating for minor considerations in order to arrive if not exactly where they wish to be at least somewhere where they will be better off than in the middle of the forest. If we wish really to emerge from the forest in which we are today somewhat lost is not the best way in fact to proceed along a path as straight as possible in the direction indicated by those who have devoted themselves to the preparation of the draft? It may not be in your power to accept as absolutely indisputable the opinions on which they have based their work, but these opinions, nevertheless retain their full value as being the most probably true.

Gentlemen you are now about to commence your work. Whatever the value of the preliminary work which has been achieved for your guidance your task still remains an arduous one and will call for the exercise of all your powers. I am nevertheless certain that you will find a way to succeed. Bearing in mind that it will be possible to improve the regulations you are about to establish you will be able without aiming at an unattainable perfection to achieve a just and reasonable balance between the technical minimum necessary to avoid the spread of disease and the administrative maximum which it is possible to impose without unnecessary

held to survey the world position as concerns brucellosis and to consider methods of improving it. The report of the panel has now been published as No. 37 in *World Health Organization Technical Report Series*.

Brucellosis which affects both livestock and man has repercussions on general economy as well as on public health. The influence of the disease on public health has two aspects: it involves a loss of working capacity among agricultural workers in particular and a reduction of vitally needed foodstuffs especially animal protein resulting from morbidity among cattle.

In the USA where efforts have already been made to limit the losses caused by brucellosis an annual saving of 50 000 000 dollars in animal production has been realized. In Norway brucellosis has been eradicated and the cost of the programme has been less than the annual loss formerly caused by the disease.

### Brucellosis in Human Beings

Human brucellosis is generally not transmitted from man to man. Infection is due to contact with animals or to infected animal products. Consequently control should take place at the stage of animal infection. In certain countries 60% to 70% of cases appear to result from handling infected matter (foetus, placenta, urine, manure) or from the inhalation of dust or dried and pulverized infected products. Infection takes place through the skin, the mucous membranes or the eyes.

The heat treatment of infected products of milk and its derivatives in particular, precautions during the handling of carcasses, personal hygiene and environmental sanitation are all factors which can reduce human morbidity.

### Diagnosis

Reliable diagnosis of the disease can be based only on the culture of the responsible micro organism which may be found in the blood, bone marrow, lymph nodes, urine, etc. There are no infallible criteria for the absence of infection.

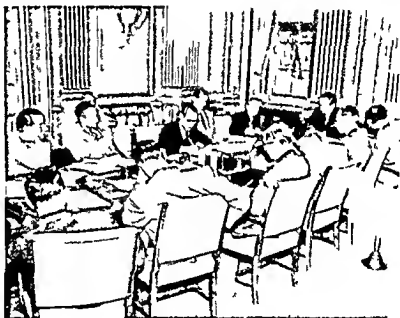
Among the procedures used for diagnosis the sero agglutination test when carried out with a suitable antigen and satisfactory technique gives positive results in cases of active infection. The complement fixation test has no practical value at the present time but it deserves further investigation. The intradermal test should be interpreted whatever the antigen used as revealing an allergic state without other diagnostic significance. The expert panel recommends that planned investigation should be carried



**FIG 1 JOINT FAO/WHO  
PANEL ON BRUCELLOSIS—I**

*General view of the panel in session*

**FIG 2 JOINT FAO/WHO EXPERT  
PANEL ON BRUCELLOSIS—II**



*One of the sessions of the Human  
Medicine Section of the panel*



**FIG 3 JOINT FAO/WHO EXPERT  
PANEL ON BRUCELLOSIS—III**

*Some of the panel members  
right Dr M Roepke Dr  
Dr A Thomsen Dr  
(Rapporteur) and Dr  
Champnaya (*

*Left  
Bendise  
lefor  
mpf*

as well as personal hygiene are all measures of fundamental importance. The success of other control measures particularly vaccination depends upon their being carried out. The latter in fact should not be considered as a substitute for hygienic precautions. On the contrary it should be remembered that vaccination cannot have its full effect if the above mentioned precautions are not observed.

### *Vaccines*

Several attenuated vaccines for use in cattle have been prepared in different countries. Strain 19—which is a smooth avirulent strain of *Brucella abortus*—at present appears to be the best from the standpoint of safety and ease of production. Living vaccines with high or unknown virulence have been used in the past but they may spread infection and should not be employed. Dead vaccines in oily excipients have given good results inferior however to those obtained with strain 19.

The panel examined the facts at present known as regards the use of strain 19 vaccine: its production, stability in the liquid or desiccated state and its control. It recommended that a central laboratory distribute seed cultures to regional centres which would in turn be responsible for distributing subcultures to the laboratories producing vaccines. The latter can obtain information concerning subculturing and the production of vaccine from WHO or FAO.

### Control of Bovine Brucellosis

Since no successful treatment of bovine brucellosis is known, all control measures must centre around preventing the infection of herds free from the disease. Conditions in the different countries are so varied that no one technique or method of control can be universally employed. Even in countries where conditions are less favourable every effort should be made to begin control measures which would lead to the final eradication of brucellosis. To this end the panel made recommendations inviting the countries to take all suitable measures. In countries where the sanitary laws concerning livestock are inadequate the following measures should be considered: the enactment of sanitary laws, the appointment of permanent qualified staff to enforce such laws, the control of imported cattle, import being confined as far as possible to heifers tested for brucellosis and coming from non infected herds, restriction of movement of cattle, education of the public, training of veterinarians and technicians. In countries with adequate sanitary laws and specialized personnel vaccination of healthy animals in infected herds and the elimination of sick cattle should be carried out in accordance with certain principles concerning which the panel made recommendations.



out with the various antigens used in the different countries so as to determine the value of this test and its possible applications

In view of the urgent need for more satisfactory criteria of infection other tests should be studied and funds made available for this purpose. Such tests include Castaneda's spot test, agglutinin blocking antibodies, the SS factor (selection of smooth variants) bactericidins, and protective antibodies in sera

### *Therapy*

Penicillin is not indicated. Streptomycin or dihydrostreptomycin, administered with the customary precautions, in combination with a sulfonamide such as sulfadiazine or with other antibiotics (aureomycin and terramycin) has given valuable results. The following dosage schedule was suggested: 1 to 2 g daily of streptomycin or dihydrostreptomycin for 14 to 21 days and simultaneous administration of 2 g of aureomycin or terramycin daily for the same period. It seems that the addition of a sulfonamide (in a dose of 3 g daily for 14 to 21 days) increases the therapeutic effect of the antibiotics mentioned above. The panel recognizes the variability in dosage schedules and anticipates revisions in the foregoing recommendations.

Both aureomycin and terramycin, used alone in a dose of 2 to 4 g daily for 14 to 21 days, have given good results. Chloramphenicol also appears to be of value. However, despite the advances which they have made possible, the antibiotics do not so far represent a final solution to the problem of the treatment of brucellosis, since relapses have been observed. Nevertheless they should be given first place whenever available, stated the panel. When appropriate antibiotics are not available, vaccine therapy, applied according to well established methods may be considered. Research should be carried out in this field and the utility of vaccines studied, particularly in cases where treatment with antibiotics has not resulted in a complete cure.

### **Brucellosis in Animals**

The elimination of infected animals (giving a positive reaction to serological diagnostic tests) and vaccination which increases the resistance of healthy animals are the two basic principles in the control and eventual eradication of brucellosis. In addition however hygiene and environmental sanitation play an essential part. The disinfection or destruction of matter which may contain brucella organisms (foetus, placenta, excreta bedding) the isolation of infected animals at parturition the elimination of those employed for artificial insemination, precautions aimed at preventing the contamination of water supplies pastures and farm premises,

zoonoses The training of public health veterinarians was discussed and recommendations were made regarding the standardization of certain biological products A list of over 80 zoonoses—together with the causative organism of each and the animals mainly involved—comprises one of the annexes of the group's report

The following brief account covers only a few of the questions discussed during the session

### Bovine Tuberculosis

Several countries have already successfully controlled bovine tuberculosis and have practically eradicated it from their livestock Control is based for the most part on tuberculin testing and the segregation or the elimination of infected animals The tuberculin test is the only method at present applicable on a large scale for detecting infected animals By removing or separating such animals from the healthy stock tuberculosis in a herd can be progressively eliminated

In practice the population of a herd is entirely renewed every six years At the end of the six years the infection will be found to have been considerably reduced if the adult females which are the most active sources of contagion are eliminated and care is taken to prevent the young stock from becoming infected For economic reasons all animals reacting to tuberculin cannot be slaughtered at the beginning of a control campaign when the herds show a high degree of infection Great Britain and the Scandinavian countries have obtained good results without recourse to this drastic measure

### Tuberculin test

All action against bovine tuberculosis is based on the tuberculin test and its interpretation Types of tuberculin used differ according to country PPD tuberculin which it was thought could be easily standardized by the determination of its nitrogen content has shown some variation in biological activity independent of now definable chemical characteristics Since this product is relatively pure and stable in the dried state however it is hoped that an international PPD standard will be developed so that tuberculins

[Continued from p. 132]

J F A s M R C V S B t r i n g s t B i g I L b o w e s I m p I C h m e l (P h r m a t i l )  
 L t d W i m l w C h h U t d K g d m  
 Dr J d H e d D r e c t S t t V t r y I n s t t T I A I I  
 Dr R M M n d y D r e c t D n f Z o o s e s M i n i s t r y f A g r i c u l d A m a l H b d r y  
 B u o s A e s A g t u  
 Dr N P l m S t t V t r y S e n L a b o r y C o p e h g D e m k  
 Dr J H S t l e C h f V t y P N H l h D C o n t i n c a b l D s e C t ( U S P b l  
 H l h S e r v ) A t l t G A U S A ( R p r t )  
 P f J V g P f v e s m t e d M l d m b E c l t l e t n A l f o r t  
 ( S e ) F a n c e ( V i C h m )  
 Dr F K W w o e o e t o e S e n r O f f i t M u n i t r y f A g r i l i u D j k r t I d e s  
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 D M M K p l n V t e r u r y O f f i c e D n f E p d m o l g t S e r v i c e s W H O ( J r S r y )  
 D K V L K v C h f A m l l d r y B r k h A g r i t t D F A O ( J S r y )  
 H T B H a l l B V S e V t n r y C o u n t a t A m a l I d t r y B h A g n l t r D i s o F A O

## Role of International Agencies

At present twelve centres for the study of brucellosis exist in various parts of the world. The panel recommended that, making use of these centres, investigation and control be intensified and that the regional centres should continue their efforts to standardize techniques, both in the field and in the laboratory. The panel also recognized that the collaboration of WHO, FAO, and the International Office of Epizootics had given successful results, making it possible to supply stock cultures and standard sera to interested workers and to give technical advice to governments.

## DISEASES TRANSMITTED TO MAN BY ANIMALS

There are over 80 known diseases which can be transmitted to man by vertebrate animals. One need only cite tuberculosis, brucellosis, rabies, Q fever, and anthrax to give an idea of the importance of some of these diseases. Brucellosis<sup>1</sup> and rabies control have already been studied by groups of experts. Several of the other zoonoses present public health problems which are of concern to many governments. Requests for technical advice received by WHO and by the United Nations Food and Agricultural Organization (FAO) led to the setting up of a Joint WHO/FAO Expert Group on Zoonoses which held its first session in Geneva from 11 to 16 December 1950.<sup>2</sup> The report on this meeting has recently been published as *World Health Organization Technical Report Series*, No. 40.

Tuberculosis, Q fever, anthrax, psittacosis, and hydatidosis are among the diseases which held the attention of the experts. Other diseases such as the virus encephalitides, leptospirosis, tularemia, trichinosis, etc. are to be considered later.

During this session the group dealt with the question of whether to formulate international sanitary regulations to reduce the risk of spreading

<sup>1</sup> *World Hlth Org techn Rep Ser* 1951 37 see page 127

<sup>2</sup> *World Hlth Org techn Rep Ser* 1950 28 summarized in *Chron World Hlth Org* 1950 4 278

<sup>3</sup> The following took part in this session:

Professor G. Altara, Director General of Veterinary Services, Office of the High Commissioner for Hygiene and Public Health, Rome, Italy.

Professor A. Ascoli, Director, Institute of General Pathology, Faculty of Veterinary Medicine, University of Milan, Italy.

Dr H. Bengtson, Chief Veterinarian, Bureau of Tuberculosis Control, Royal Veterinary Board, Stockholm, Sweden.

Dr B. D. Blood, Chief Veterinary Public Health Section, Pan American Sanitary Bureau (WHO Region 1, Office for the Americas), Washington, D.C., USA.

Dr Daniel Cabot, Président de l'Office International des Epizooties, Paris, France (Chaire).

Dr V. Carneiro, Chief Technical Section, Institute of Biology, São Paulo, Brazil.

Professor T. Dalling, Chief Veterinary Officer, Animal Health Division, Ministry of Agriculture and Fisheries, London, United Kingdom.

in man ? The group discussed this question and it became evident that it would be difficult to frame regulations acceptable to all countries for while certain countries might be ready to impose the most stringent regulations others would be unable to do so for economic reasons or because they are obliged to import livestock. Nevertheless the problem is worthy of further consideration. It should be determined which of the zoonoses are the most important from the international viewpoint and what measures might be enacted. WHO, FAO and the Office international des Epizooties will submit a report relative to this at the next session of the group. The following ten diseases seemed sufficiently important to warrant a study of sanitary measures to combat them: equine virus encephalitis, rabies, psittacosis, Q fever, leptospirosis, tularaemia, leishmaniasis, bilharziasis, trichinosis and hydatidosis.

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## INTERNATIONAL DOCUMENTATION ON HEALTH LEGISLATION

*Clearly we have to hope that in proportion as exact knowledge is gained of agencies prejudicial to the public health the nation will provide against them by appropriate law and by effective administration."*  
J. SIMON<sup>1</sup>

According to the terms of Article 10 of the annex to the 1907 Rome Agreement the Office International d'Hygiène Publique (OIHP) was required to publish laws and regulations national or local concerning communicable diseases issued in various countries. Thus from 1909 to 1946 health legislation—some of which was not however directly concerned with communicable diseases—was published in French in a special section of the *Bulletin mensuel de l'Office International d'Hygiène publique*. This function of OIHP was of prime importance: if the dissemination of information concerning new prophylactic and therapeutic methods is to be considered an expression of international collaboration in health matters it is likewise important to make known the legislative measures which permit their application.

At its second session the WHO Interim Commission decided that health legislation should be published by WHO in the form of a separate periodical—the *International Digest of Health Legislation*—appearing in French and in English instead of merely constituting a section of the *Bulletin of the*

used in various countries can be compared. In addition, standard strains of tubercle bacilli should be made available for the preparation of tuberculin. Theoretically, an avirulent bovine strain would be best.

All the known tuberculins have the disadvantage of causing non specific reactions. These reactions may be due to the presence of acid fast bacilli other than the bovine tuberculosis organism causing an allergic condition which results in a positive (non specific) reaction. Thus the human tubercle bacillus, relatively non pathogenic in cattle, transmitted to these animals by tuberculous attendants may be the source of non specific positive reactions. On the other hand, some animals, although suffering from advanced open tuberculosis, do not react to tuberculin.

Although the tuberculin test does not give absolutely specific results its shortcomings must not be allowed to overshadow its usefulness. Efforts are being made to increase the specificity of the test. One of the advances recently introduced consists of carrying out a comparative intradermal test in which avian and mammalian tuberculins are injected in two sites on the neck of the animal at the same time.

### *Role of vaccination*

Vaccination of livestock, particularly with BCG, may be considered a temporary expedient applicable under certain conditions of economic hardship when it is necessary to reduce the spread of the disease before eliminating the infected animals. Vaccination has its disadvantages: it may create an allergy non distinguishable from natural infection, intravenous injection of BCG—which sometimes replaces subcutaneous injection—may produce local or general reactions. Vaccination must therefore be used with caution. Tuberculosis free calves should be vaccinated as soon after birth as possible and then protected against exposure to infection for several weeks. Vaccinated animals should be introduced into the herd to replace gradually those which react to tuberculin which are then eliminated. The former in their turn, will be progressively replaced by non vaccinated tuberculosis free animals. In this way vaccination can be a useful additional weapon to controlling bovine tuberculosis.

In addition to BCG the murine tubercle bacillus (vole bacillus) has been used as a vaccine. Experiments have shown that this organism gives animals a higher resistance than that brought about by BCG, but the virulence of the strains used is still too variable for general use of this vaccine to be advisable. Further study of this method is desirable.

### **International Sanitary Measures Against Zoonoses**

Is it possible to establish sanitary regulations to prevent the spread of the zoonoses, similar to the regulations dealing with contagious diseases

The material sent by the various countries consists principally of official gazettes bulletins issued by public health services texts selected by national administrations and health journals with a section on legislation These texts constitute a considerable amount of information in many different languages This material is carefully examined and all the enactments relating to health are indexed and classified The laws which are selected are then published in the *Digest* where according to their importance they are reproduced in full or in extract form are summarized or are simply noted by their titles The *Digest* appears quarterly in two editions—French and English However certain difficulties impeded regular publication of the *Digest* before the end of 1949

Volume 1 which was completed in 1950 contains 241 texts of which 112 were published either in full or in extract form The index published in No 4 of this volume shows that a considerable number of different subjects have been covered For example under the heading of "Tuberculosis" 13 different subjects are treated in texts from 8 countries

Certain improvements have been introduced in the *Digest* starting with Volume 2 No 1 notably with regard to the arrangement of texts All the legislation of one country is now placed together previously those which were summarized or mentioned by title appeared only in a separate section entitled "List of Selected Health Legislation" In addition starting with Volume 2 each number includes a bibliographical section in which are given summaries of the contents of publications on health legislation received by the WHO Library An index to Volume 2 will be published as in Volume 1 with No 4 It is anticipated that a cumulative index will be published at the end of five years which will facilitate reference Delays in publication of certain legislation will gradually be reduced

It should be noted that labour legislation is published in the *Legislative Series* of the International Labour Office Legislation concerning the control of drugs liable to produce addiction is published by the Commission on Narcotic Drugs of the United Nations Economic and Social Council in two series of fascicles entitled *Laws and Regulations communicated in compliance with the terms of the Convention of 13 July 1931 for limiting the manufacture and regulating the distribution of narcotic drugs as amended by the Protocol of 11 December 1946* and *Annual Reports of Governments under the Convention of 13 July 1931 for limiting the manufacture and regulating the distribution of narcotic drugs as amended by the Protocol of 11 December 1946* Finally legislation concerning the welfare of children is published by the Department of Social Affairs of the United Nations in the *Legislative and Administrative Series Child and Youth Welfare* the first volume of which deals with legislation of 1949 a summary of legislation passed in previous years on this subject appeared in the *Annual report on child and youth welfare* of the United Nations

*World Health Organization* It was felt that, by its very nature, health legislation would appeal primarily to a specialized group of readers. The *Digest* is of interest particularly to national health administrations since valuable information regarding legislative measures for enabling countries all over the world to solve public health problems can be found therein. Professors of hygiene, public health experts and other specialists can also find in the *Digest* important technical information concerning, for example, the standards with which certain food products must comply in different countries, and the conditions for approval of hospital equipment and construction and of swimming baths, slaughter houses, etc.

At its sixth session, the WHO Executive Board approved the criteria proposed by the Director General for the selection of legislative texts for publication in the *International Digest of Health Legislation*.<sup>2</sup> Legislation of a strictly local administrative nature—such as the establishment and composition of committees, penal provisions, granting of subsidies for health work and remuneration of officials—are not of interest to other countries and are therefore not to be published. On the other hand laws which come within one of the following categories are of international interest:

(a) laws which by their general and basic nature may serve as “models”—for example the act concerning the exercise of the medical profession (Austria)<sup>3</sup> and the regulations concerning food and drugs (Ceylon),<sup>4</sup> already published in the *Digest*.

(b) laws and regulations giving effect to certain health measures which are not yet compulsory in a number of countries—for example the three laws all differing in scope and character concerning BCG vaccination in Austria, France and Yugoslavia.<sup>5</sup>

(c) laws and regulations relating to the use and dangers of new substances (antibiotics, radioactive substances, etc.),

(d) health legislation affecting the international circulation of persons and goods, including quarantine measures and the standards and conditions with which therapeutic substances, foodstuffs and other products must comply in order to be placed on the market in certain countries.

The legislation which is at WHO's disposal for publication comes chiefly from Member States, as was provided for in Article 63 of the Constitution. Unfortunately, and in spite of repeated requests, certain countries do not send copies of their legislation to WHO or else do so only very irregularly.

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Resolution EB6.R19. Off. Rec. World Health Org. 29.9.

1. *Int. Dig. Health Leg.* 1951, 2, 344.

2. *Int. Dig. Health Leg.* 1951, 2, 372.

3. *Int. Dig. Health Leg.* 1950, 2, 166, 243, 329.

with them so as to advise on the most useful condensations and to try to avoid too much diversity in such supplementary lists

6 Study of the elaborations by special subdivisions of categories in the detailed list which are being made for national purposes and by specialist organizations with a view to avoiding unnecessary diversity and collecting experience on the use of such elaborations

7 Study of progress of research projects involving the use of the *Classification* which have been recommended by the Expert Committee on Health Statistics and by its subcommittees

Correspondence to Dr Stocks should be addressed to WHO Centre for Problems Arising in the International Classification of Disease General Register Office Somerset House London WC2 England

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## Notes and News

### Dr M G Candau Becomes Assistant Director General

Dr M G Candau Director of the WHO Division of Organization of Public Health Services has been named Assistant Director General in charge of the Department of Advisory Services. He succeeds Dr Martha M Eliot<sup>1</sup> who is retiring.

Dr Candau was born in Rio de Janeiro Brazil in 1911. He received his medical education at the School of Medicine of the State of Rio de Janeiro and his public health training at the University of Brazil and the School of Hygiene and Public Health of Johns Hopkins University Baltimore Md USA.

Dr Candau has held numerous public health posts in his native country. Chief of various rural health centres. Assistant and Acting Chief of the Service of Studies and Research of the Division of Maternity



FIG 4 DR M G CANDAU



## STATISTICAL CENTRE ESTABLISHED

Arrangements have now been concluded for the establishment of a WHO centre for problems arising in the application of the *International Statistical Classification of Diseases Injuries and Causes of Death*. The establishment of such a centre was recommended by the Expert Committee on Health Statistics<sup>1</sup> and was approved by the Third World Health Assembly<sup>2</sup>. It will be located at the General Register Office, London and will be directed by Dr P. Stocks who has retired from the post of Chief Medical Statistician to undertake this work.

The principal activities of the centre may, for the present, be grouped under six headings:

1 Study of coding difficulties experienced by national offices such difficulties arising from

- (a) errors and faults in the *Classification* itself,
- (b) lack of precision in the rules for selecting the underlying cause of death
- (c) variations in the form and use of the medical certificate of cause of death,
- (d) absence of rules for dealing with multiple conditions in morbidity

2 Discussion with national offices using the *Classification* in order to resolve as quickly as possible the difficulties listed above, by giving decisions on minor points and reaching agreement on tentative solutions of more important matters, these solutions being subject to subsequent confirmation by the Expert Committee on Health Statistics or by a subcommittee.

3 Study of comparability of the new *Classification* with the 5th Revision as shown by statistics of deaths coded by both lists without change of certificate or rules of selection with a view to producing a report to help countries in their difficulties in linking the new statistics to those of past years.

4 Study of the use being made in one or more countries of the International Certificate of Cause of Death, with special reference to entry of multiple causes, interval between reputed onset of disease and death etc., in hospital, rural and urban practice so that a report can be drawn up for sending to other countries and for submission to the Expert Committee on Health Statistics.

5 Study of the various condensed lists coming into use for all kinds of purposes, particularly hospital statistics and of the experience gained

sible for transmitting either filariasis or malaria and made microscopic examinations of blood samples from 3 878 of the islanders. Ashore they investigated the breeding places of the incriminated mosquitos and recommended simple and inexpensive control methods to the authorities.

The team members narrowly escaped death when in an attempt to reach Ceylon in their schooner they were caught in a cyclone which lasted 42 hours. After 15 days at sea the craft managed to return to Male the Maldivian capital from where the scientists were picked up by a steamer which went out of its course to rescue them and take them to Karachi.

### **Consultant in Health Education Joins WHO/UNESCO Team**

Dr C E Turner WHO consultant in health education worked during the month of May with the WHO/UNESCO fundamental education team operating in the Sindibis area near Cairo Egypt. This team which has been at Sindibis since December 1950 and which will remain in Egypt until June 1951 is aiding the Egyptian Government in efforts to improve techniques in agriculture health and fundamental education. Dr Turner will concentrate on health education of the public.

Before going to Egypt Dr Turner visited Iraq where he assisted the Government in the public health aspects of a project in which 1 000 families were being settled on the land. He also consulted with Iraqi military authorities on means of improving the teaching of hygiene to army recruits.

Dr Turner who holds the degrees of M A from Harvard University M Ed from Boston University and Doctor in Public Health from the Massachusetts Institute of Technology Cambridge Mass USA was formerly Professor of Public Health Emeritus at the Massachusetts Institute of Technology and is now Assistant to the President of the National Foundation for Infantile Paralysis President of the Society of Public Health Educators and the author of several books on health education.

### **Maternal and Child Health Project in Burma**

A WHO maternal and child health venereal disease team will with UNICEF financial assistance aid the Government of Burma in a two year project to improve health services particularly those relative to maternal and child health care. The team will consist of a paediatrician a specialist in venereal diseases a serologist five nursing instructors and four public health nurses. The Government of Burma will provide counterparts for the international staff as well as auxiliary personnel materials and services which are available locally and office and living accommodation for the international team.

Dr J E B McPhail of Canada has assumed the post of paediatrician. Before accepting this WHO appointment Dr McPhail served as adviser in child health to the UNICEF China Mission. One of the nursing instructors recruited for the project Miss R Ingram of the USA has already been working in the Rangoon General Hospital for several months.

The project in addition to generally strengthening the health services of Burma will aim to establish a paediatric department in the Rangoon General Hospital to improve hospital and laboratory facilities to diagnose and treat syphilis in mothers and children to expand school health services and to improve and extend teaching facilities for health personnel.

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and Child Welfare of the National Health Department Technical Assistant to the Director General of the Department of Health of the State of Rio de Janeiro Health Officer of the Northeast Malaria Service Chief of the City Health Centre in Niterói State of Rio de Janeiro Assistant Chief Medical Department of the Service for Mobilization of Workers for the Amazon and most recently posts with the Serviço Especial de Saúde Pública—Director Division of Health Education (1943-4) Assistant to the Superintendent (1944-7) and Superintendent (1947) (The Serviço Especial de Saúde Pública is a co-operative public health organization of the Brazilian Government and the Institute of Inter American Affairs which serves about 45% of the total population of Brazil and employs nearly 2 000 doctors engineers nurses, and other health personnel)

In addition Dr Candau has done considerable work in education being Assistant Professor of Hygiene of the School of Medicine of the State of Rio de Janeiro since 1938 and Assistant Professor of Epidemiology at the Course of Public Health of the Ministry of Education and Health of Brazil He has published a number of papers on public health subjects and has been active in public health organizations among them the Brazilian Society of Hygiene of which he was Executive Secretary 1946-7 and President 1948-9 the Royal Society of Tropical Medicine and Hygiene London the Inter American Association of Sanitary Engineering and the American Public Health Association of which he was Vice President in 1949-50 He joined the staff of the World Health Organization in May 1950

### First Class Graduates from Copenhagen Anaesthesiology Centre

Thirty medical Fellows from seven European nations have completed the first one year course given at the Anaesthesiology Training Centre Copenhagen The Centre a co-operative enterprise of the Faculty of Medicine of the University of Copenhagen and WHO was established in May 1950<sup>1</sup> WHO provides for the maintenance and travel of the foreign Fellows at the Centre and book allowances for the Danish students It has also supplied anaesthesia equipment for use in the training courses which are actually given at the four principal hospitals in Copenhagen

A representative of the Director General of the World Health Organization attended the ceremonies which marked the graduation of the class and expressed appreciation of the Centre's accomplishments "As our trainees go back home their services will become focal for the training of more anaesthesiologists and this process will go on until in a few years time anaesthesiology will have found its new and proper place in all European countries

A second group of thirty Fellows—from Denmark Finland France Greece Norway Sweden Switzerland and Yugoslavia—began their training on 3 May Dr R Woolmer of the University of Bristol England will be the new Senior Instructor for this second course

### Successful Filariasis Survey Completed

A three man expedition sent by WHO to the Maldive Islands to survey the filariasis situation there has successfully completed its mission despite considerable odds Dr M O T Iyengar of Calcutta and Messrs M I Mathew and M A U Menon both of Travancore lived and worked on a small schooner which took them to 33 islands in the three southern atolls of the Maldive Archipelago a British Protectorate situated on the Equator 400 miles west of Ceylon They examined 4 000 persons in their survey and found that one in every three suffered from filariasis in one stage or another In a small laboratory aboard the schooner they identified the various species of mosquitos respon-

Of the continents Asia and Africa are the two most in need of help. Asia or that part of it still accessible to the United Nations is already being assisted to a considerable degree and increasing attention is now being paid to Africa.

Disease is not confined within political boundaries and only the strongest geo-

graphical frontiers as the sea or a high range of mountains limit their spread. *WHO* is obtaining a global viewpoint of disease and its efforts deserve our fullest support. If nothing else of the United Nations survived other than *WHO* it would still represent a proud monument of our Age !

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# Views on WHO

## World Health

A recent editorial in *Medicine Illustrated* (1951 5 51) is devoted to the accomplishments of WHO

In times when men are somewhat disillusioned and certainly disappointed with the results achieved by the United Nations in the wider political sphere it behoves us to pause and be thankful for the considerable achievements and contributions to world progress that the medical profession at least has been able to make in the international field. Their work on behalf of the United Nations has already produced some tangible and lasting results in which pride may justly be taken.

It was at the San Francisco Conference in 1945 that the decision was made for the United Nations to create a specialized agency in order to deal with problems of world health. The constitution of the WORLD HEALTH ORGANIZATION was drafted in 1946 and this body was finally established officially in 1948. From its inception problems relating to *malaria*, *tuberculosis*, *venereal diseases* and *malnutrition* have received the highest priority and already WHO can point to the successful organization of vast projects on a scale undreamt of only a few years ago—and after less than three years of official existence!

Much of the early work has been of necessity exploratory in nature for before a solution to a problem can be attempted it is at first essential to know its extent. The collection of proper statistics from geographical rather than political areas often where none previously have existed is a time-consuming undramatic but basic feature of any campaign. The definition of base lines on which to commence has been the task of various Expert Committees and their findings have been published in the ever growing number of technical reports which have appeared during 1950. These cover a wide range of subjects

from the Unification of Pharmacopoeias the Biological Standardization of Drugs and the consideration of sanitation and insecticides to matters concerned with actual diseases as *plague*, *cholera*, *bilharzia*, *malaria* and the *venereal diseases*.

Committees of assessment have been followed by the appointment of travelling advisers and by the initiation of field surveys. The not inconsiderable number of specialist advisers from all over the world who have been widely circulated by WHO cannot but have had an enormous influence in accelerating the introduction of modern methods in medically backward countries—a process of levelling up. A number of areas have been selected for the demonstration of mass therapy and prophylaxis guided at first by imported advisers so that they may teach local personnel to carry on for themselves.

Some of the most spectacular projects already in operation are those concerned with the *treponematoses*. At the time of writing a vast mass treatment campaign using procaine penicillin is attempting to eradicate *jaws* from the island of Haiti. Another scheme of a like nature proceeds apace in Indonesia. The present year sees the commencement of yet another planned operation which may ultimately lead to the extinction of *bejel*. This disease ravages the Bedouin Arabs of both Iraq and Syria. It has been estimated that in Iraq alone a million persons may have or have had it. The WHO project is partly exploratory in the hope that by means of a detailed study with the aid of adequate methods of diagnosis the findings may be applicable to kindred *treponematoses* all over the world. The survey will be followed by mass treatment. It is most fitting that the Director of this *bejel/syphilis* project should be Dr Ellis H. Hudson of Ohio, U.S.A.—for it was he as a mission doctor in Syria over a quarter of a century ago who first described the *bejel*.



# CHRONICLE OF THE WORLD HEALTH ORGANIZATION

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*John T FULTON*

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English edition only

**MANUAL OF FRAMBOESIA**

*Kenneth R HILL*

*R KODJAT*

*M SARDADI*

No 5 1951 in preparation

This manual gives a clinical description of the skin manifestations of framboesia amply illustrated by photographs The authors divide the conditions into sixteen main groups and compare their nomenclature with the terminology used by previous writers

# SPECIFICATIONS FOR INSECTICIDES AND METHODS OF APPLICATION

Establishing specifications for insecticides and spraying apparatus is a function rightfully within the province of an international health organization since disinsection plays an important part in the worldwide control of malaria and other insect borne diseases. This function of WHO was one of the chief concerns of the Expert Committee on Insecticides when it met for the second time<sup>1</sup> from 4 to 11 October 1950 to continue its work of drawing up what will probably become an international manual on insecticides and spraying equipment. The report of the committee has recently appeared as *World Health Organization Technical Report Series No. 34*.

## Disinsection Methods for Quarantine Purposes

The committee had been requested by the Executive Board to collect technical information on the disinsection of ships and aircraft for submission to a joint session with the Expert Committee on International Epidemiology and Quarantine which was held on 10 October. The Expert Committee on Insecticides therefore reviewed the procedures outlined in the report on its first session<sup>2</sup> and amended them in the light of information which had since become available.

The following took part in this session:

- M. Aziz Bey, Chief Health Inspector, Medical and Health Department, Nicosia, Cyprus  
 Amiral R. Bona, France  
 Dr R. A. E. Gilby, Secretary, Joint Departmental Insecticide Committee, Agricultural Research Council, London, United Kingdom (Chairman)  
 G. Holt, United Kingdom Shipping Expert  
 Dr J. H. Hughes, Chief Entomology Section, Department of Foreign Quarantine, US Public Health Service, Washington, D.C., USA  
 Médecin Inspecteur J. Léniz, Directorate of Service of Control, Tunis, France  
 Dr J. A. Log, Superintendent, Entomology, Lepidoptera, Lotta Antifiliciana, S. Diego (ERLAAS), Chile  
 Professor G. M. Chittadiser, Animalia Service of the Government, F. I. I. Directorate, Malaya  
 Research Station, Rome, Italy  
 Professor A. Missirli, Chief, Pathology Laboratory, Istituto Sperimentale di Sanità, Rome, Italy (President)  
 Dr B. Simmo, Secretary, Director, Chief Technical Department, Services Communales, Disinsection (US Public Health Service), Savannah, Georgia, USA  
 Dr J. Trebo, Research Laboratory, J. R. Geigy S.A., Basel, Switzerland

Obs.

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S. i. y.

J. W. Wright, Malaria Section, WHO

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## RECENT AND FORTHCOMING MEETINGS

1950

- 29 November WHO Expert Committee on International Epidemiology and Quarantine Legal Subcommittee third session Geneva
- 67 November WHO Expert Committee on the Unification of Pharmacopoeias Subcommittee on Non Proprietary Names first session Geneva
- 6-11 November WHO Expert Committee on Biological Standardization fourth session Geneva
- 6-13 November FAO/WHO Expert Panel on Brucellosis first session Washington
- 27 November Commission for Technical Co-operation in Africa WHO Malaria
- 9 December Conference in Equatorial Africa Kampala Uganda
- 11-12 December Preparatory Working Group on a Public Health Administration Seminar Geneva
- 11-16 December WHO Expert Committee on Malaria fourth session Kampala Uganda
- 11-16 December WHO Expert Committee on Mental Health Subcommittee on Alcoholism first session Geneva
- 11-16 December Joint WHO/FAO Expert Group on Zoonoses first session Geneva

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- 8-30 January WHO Executive Board Standing Committee on Administration and Finance Geneva
- 22 January WHO Executive Board seventh session Geneva
- 5 February
- 30 January Léon Bernard Foundation Committee Geneva
- 9 April-4 May WHO Special Committee to consider the Draft International Sanitary Regulations prepared by the Expert Committee on International Epidemiology and Quarantine Geneva
- 10-17 April Joint FAO/WHO Expert Committee on Nutrition second session Rome
- 19-28 April WHO Expert Committee on the Unification of Pharmacopoeias eighth session Geneva
- 30 April-1 May WHO Expert Committee on the Unification of Pharmacopoeias Subcommittee on Non Proprietary Names second session
- 7-25 May Fourth World Health Assembly Geneva
- 18 May WHO Regional Committee for the Western Pacific first session Geneva
- 28-29 May WHO Consultative Committee for Europe first session Geneva
- 1-18 June WHO Executive Board eighth session Geneva
- July WHO Expert Committee on Drugs Liable to Produce Addiction third session Geneva
- July tentatively
- 30 July WHO Expert Committee on Insecticides third session Savannah Ga
- 4 August
- September WHO Regional Committee for the Western Pacific second session Manila
- September WHO Regional Committee for the Eastern Mediterranean fourth session Teheran
- September WHO Regional Committee for South East Asia fourth session Rangoon

FIG 2 INSECTICIDES II



Applying DDT residual spray

treatment should be carried out after landing. Disinsection by the crew during flight is not to be considered adequate.

An aerosol containing 0.4% w/w pyrethrins and 3.0% w/w DDT (4 mg pyrethrins and 30 mg DDT per 1 g) dispensed at the rate of 10 g of the formulation per 28 m<sup>3</sup> (1 000 cubic feet) of enclosed space is the method of choice for disinsecting the interior of aircraft though equally effective formulations may be used. The insecticide should be non inflammable and non injurious to furnishings and equipment should meet the requirements regarding non production of crazing of stressed Perspex (plexiglas) (test described in the committee's report) and if used in the presence of passengers and crew should be non injurious to health and of minimum discomfort. Recommended spraying time using the above formula is 5 seconds per 28 m<sup>3</sup>.

The Expert Committee on Insecticides suggested that WHO might specifically investigate the possibilities of (1) reducing in aircraft construction the number of places in which mosquitos may find shelter and which are difficult of access to insecticides (2) impregnating aircraft fabrics and fittings with residual insecticides (3) using residual deposits of insecticides inside and outside aircraft and (4) developing fixed spraying equipment inside aircraft.

The committee endorsed the recommendation of the Expert Committee on Malaria (third session) concerning 'rigid antimosquito sanitation within mosquito flight range of sea and airports'.<sup>4</sup> It suggested however that sanitary regulations governing the routine disinsection of ships and aircraft apply only to 'areas suspected of being infested with insect vectors of disease' to such a degree that they represent a danger to other countries, these areas to be defined by the Expert Committee on International Epidemiology and Quarantine. The definition of the authority responsible for carrying out or supervising disinsection operations was also left to the Expert Committee on International Epidemiology and Quarantine, but it was strongly recommended that this be made the duty of the health authority.

In annexes to its report the committee gave itemized time and cost estimates for various quarantine operations including disinsection of aircraft and ships.

### *Aircraft*

It was recommended that aircraft be disinfested before departure, but if the presence on board of live insect vectors is suspected additional

FIG 1 INSECTICIDES 1



Preparing insecticides and spraying apparatus

## Specifications

### *Spraying apparatus*

The committee reviewed and amended the specifications for knapsack/compression and hand sprayers which it had drawn up at its first session<sup>5</sup> and in addition drafted tentative specifications for stirrup pumps. Stirrup pumps may be most economical for use if a plentiful supply of cheap labour is available and if this type of equipment is readily obtainable while other kinds are difficult to procure because of currency difficulties.

### *Insecticides and their formulations*

Besides revising the specifications for DDT as approved at its first session<sup>6</sup> the committee drew up specifications for technical benzene hexachloride (12/14/ gamma BHC) gamma isomer benzene hexachloride concentrates (90/ and above) technical chlordane (agricultural and refined grades) (tentative specifications) methoxychlor wettable powder concentrates of DDT and BHC and DDT emulsion concentrates (tentative specifications). Packing and marking of packages were indicated for each insecticide the latter including a cautionary notice regarding the toxicity of the products.

Also described were test procedures for determining the chemical composition and physical characteristics of each insecticide e.g. the Winter Parr peroxide bomb and Stepanow methods for determining total organic chlorine content the polarographic and chromatographic methods for determining gamma isomer content of technical BHC maximum diameter (particle size) determination agglomerate test settling rate and tropical storage tests for DDT wettable powder concentrates and flash point determination (both TAG Closed Tester and Cleveland Open Tester methods) for DDT emulsion concentrates.

The report on this session of the Expert Committee on Insecticides was of considerable value to the Expert Committee on International Epidemiology and Quarantine the Expert Committee on Malaria<sup>7</sup> and the Malaria Conference in Equatorial Africa held in Kampala Uganda in late November 1950<sup>8</sup>.

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W	ld	Hlth	O	g	t	h	R	p	S	1951	38	

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## *Ships*

The committee called attention to the paucity of information concerning disinsection of ships and listed the following points on which WHO should seek data

- (1) how and from what distances insect vectors of disease are able to infest ships ,
- (2) distribution of such insects on board ,
- (3) their survival rate in various places in harbour and during voyages under varying meteorological conditions
- (4) the efficacy of various insecticides and methods of application, including residual sprays, in different parts of the ship
- (5) the influence of the size of the ship on the risk of its being infested and thereby being a cause of reinfestation of a freed area , and
- (6) 'tainting' effects of insecticides on foodstuffs and cargoes

Recognizing that insecticidal treatment of ships arriving in ports from infested areas might interfere with the free flow of traffic and also that a negative result on inspection is no guarantee that a craft is free from insect vectors of disease, the committee recommended as a compromise, and pending receipt of further information, that the routine treatment of ships arriving in ports declared free from insect vectors be abandoned and replaced by routine inspection. For boats of small size (25 tons or less), however, it may be easier to treat than to inspect and the health authority should be given this option

It was specifically recommended that

- (1) treatment be carried out only on those ships found to be infested with malaria vector species and in those portions of the ship decided upon by the health authority ,
- (2) this procedure be adopted in the examination of ships for disease vectors which are not present in the port of arrival but which could become established there ,
- (3) those countries which have formally declared certain areas of their territories free from malaria vectors continue to maintain a health service at the ports in those areas this service to be capable of inspecting and, when necessary of treating incoming ships

Space spraying of ships may be appropriate in some instances , but, where there are regular and frequent services between the port concerned and nearby territories residual treatment would probably be the method of choice. For space spraying the procedure specified is the same as for the interior of aircraft, i.e., aerosol containing DDT and pyrethrins (see above) or equivalent formulation. Residual spraying requires the application of DDT suspensions, solutions or emulsions at the rate of 2 g per m<sup>2</sup> (200 mg per square foot)

with residual insecticides in various countries have brought about a progressive reduction in numbers of anophelines which may lead eventually to their complete elimination. The results of the campaigns have often surpassed expectations.

Eradication campaigns in Sardinia and Cyprus have been carried out in territories protected from reinfestation by natural barriers—in this case by the sea. The next phase in eradication experiments should be the trial of similar treatment in regions without any such natural protection. The Malaria Conference in Equatorial Africa discussed this matter but did not make any recommendations on the subject. It noted the eradication scheme instituted at Ilaro, Nigeria, by the Malaria Service of the Nigerian Government as an effort to implement the recommendations of the Expert Committee on Malaria.

Ilaro is a small town of some 12 000 inhabitants and 2 300 houses and it represents a semirural community situated in a region where malaria is hyperendemic. The residual insecticide spraying was commenced in March 1950 and is repeated every three months. All the houses and all buildings within a radius of 4.5 km of the town are treated.<sup>3</sup>

The committee expressed its thanks to the Government of Nigeria for this initiative and suggested that similar programmes be implemented elsewhere based on the following principles:

(1) careful choice of an area infested by *Anopheles gambiae* and not containing any major economically unmanageable tract;

(2) careful survey of the area in order to estimate prevalence of malaria and the density of adult and larval vector anophelines during each season of the year;

(3) control measures—larvicidal and/or imagocidal—with careful check on anopheline density and distribution both adult and larval;

(4) investigation and eventually adoption of all antilarval or anti-adult measures or modifications thereof which might contribute to successful control.

The committee recommended that the attention of governments be drawn to these principles. It considered that WHO should encourage the implementation of such experimental programmes and if necessary provide technical assistance to governments wishing to apply them.

### Disinsection of Airports

The committee considered the measures which would be advisable for preventing transport of anophelines by international air transport and

<sup>3</sup> The information is taken from a paper by Dr L. J. Bruce-Chwatt entitled 'Malaria in Nigeria: how progress is being made to the Malaria Conference in Equatorial Africa and which will be published in the forthcoming issue of the Bulletin of the World Health Organization'.

## MALARIA CONTROL

The report on the fourth session of the Expert Committee on Malaria<sup>1</sup> has been published as No. 39 of the *World Health Organization Technical Report Series*. The session was held at Kampala, Uganda, from 11 to 16 December 1950, after the Malaria Conference in Equatorial Africa.

Some of the problems of malaria control in Africa were discussed. The measures to be adopted to avoid transporting anophelines from one region to another in aircraft were considered, and WHO's activities in connexion with malaria control were reviewed and commented upon. The following is a summary of the discussions and the principal recommendations of the committee.

### Eradication

In 1948, the Expert Committee on Malaria discussed the respective merits of the two conceptions of malaria control, which at that time appeared to be based on different principles.

(a) eradication of the vector species i.e., destruction of the mosquitos and their larvae by intensive action in a limited zone during a relatively short period,

(b) control by repeated spraying of residual insecticides over several years, without attempting actual eradication of the vector species.

During the recent session the committee again examined this question. It was of the opinion that the original divergence between the two points of view tended today to become less wide, the two systems being in fact, complementary. Experience has shown on the one hand that the essence of an economic eradication scheme is prolonged persistent attack and on the other hand that the successful malaria-control campaigns carried out

#### *The following took part in this session*

- Dr S. Annecke, Deputy Chief Health Officer, Union Department of Health, Tzaneen, Transvaal, Union of South Africa  
 Professor F. J. C. Cambournac, Professor, Institute of Tropical Medicine, Lisbon, Director, Malaria Institute, Aguas de Moura, Portugal  
 Major-General Sir Gordon Covell, Adviser on Malaria, Ministry of Health, Director, Malaria Laboratory, Horton Hospital, Epsom, Surrey, United Kingdom (Chairman)  
 Professor G. Macdonald, Director, Ross Institute of Tropical Hygiene, London School of Hygiene and Tropical Medicine, London, United Kingdom  
 Dr P. F. Russell, Representative in Italy of the Rockefeller Foundation, International Health Division, Istituto Superiore di Sanità, Rome, Italy  
 Lieutenant-Colonel J. Singh, Director, Malaria Institute of India, Additional Deputy Director-General of Health Services, New Delhi, India  
 Professor N. H. Swellengrebel, Professor of Parasitology, University of Amsterdam, Director, Institute of Tropical Hygiene, Amsterdam, Netherlands  
 Médecin-Général M. A. Vauzel, Inspecteur Pathologie tropicale, Paris, France (Vice-Chairman)  
 Dr D. B. Wilson, Director, East African Malaria Unit, Mbuha, Tanganyika

#### *Secretary*

Dr E. J. Pampana, Chief, Malaria Section, WHO

<sup>1</sup> The report of this conference is published as *World Health Organization Technical Report Series* 1951:38. See also *Chron. Wo. Hlth. Org.* 1951:5:95.

that the success already obtained justified the continuance of the assistance which WHO has given to underdeveloped countries and considered that it should establish the claim of malaria as a WHO priority. It reaffirmed the recommendation made fourteen years ago through the Intergovernmental Conference of Far Eastern Countries on Rural Hygiene that 'in those areas where malaria is the outstanding social and health problem the resources of the health administration should be directed chiefly towards malaria control until malaria is no longer of major importance' 4

The committee suggested a few modifications which might be introduced into the WHO work methods. The particular points stressed were the prolongation of the assignments of members of demonstration teams to a minimum of three years, the organization of a greater number of malariology courses and the granting of more fellowships which in certain cases should be awarded for short term practical field training. The shortage of technical personnel will be particularly felt in Africa when control programmes begin to be undertaken more or less generally. International courses on malariology as recommended by the Malaria Conference in Equatorial Africa could also make a useful contribution to the training of personnel for directive posts in malaria control.

### Insecticides

After declaring itself in agreement on the main points of the report on the second session of the Expert Committee on Insecticides 5 the committee emphasized the particular significance of one of the recommendations of that report—a recommendation concerning the necessity for the intensification of scientific research. The committee mentioned a problem the solution of which is most urgent—the resistance of insects to insecticides. A considerable number of insect strains of various species have become resistant to DDT, BHC, Chlordane and Dieldrin. These substances no longer deal effectively with houseflies. While up to now no species of anophelids has been found resistant to the above mentioned insecticides, yet the fact that some species of *Culex* and *Aedes* are resistant to them shows that we must be on our guard. Research with the co-operation of organic toxicant chemists and physiologists should make it possible to determine the relationship between insect toxicant and formulation.

The committee also examined the recommendations of the Malaria Conference in Equatorial Africa, in particular those relating to control in hyperendemic regions. The actual situation with regard to the chemo-

League of Nations Health Organization (1937) Report of the 1st International Conference of Far Eastern Countries on Rural Hygiene, Geneva, 1937, p. 90.  
World Health Organization Report 5, 1951, 34, Serial page 147.



which would at the same time safeguard traffic facilities to an extent compatible with the maintenance of public health. The two most important dangers are

(1) transport of important vector species outside their normal area and their introduction into another continent—it is known, for example, that *A. gambiae* penetrated into America in this manner,

(2) invasion by anophelines of regions adjoining their normal distribution area, and reinfestation of zones which have been freed from vector species

Protection measures must guard against these two risks. They should include, in particular, rigorous disinfestation of airports, no measures applied to aircraft can lessen the importance of such precautions

In addition, the following provisions might be made

WHO might prepare a list of anophelines considered to be of major importance, whose passage from one continent, or subcontinental division, to another constitutes a serious danger. Such a list should include *A. albimanus culicifacies darlingi, gambiae, labranchiae, melas, sacharovi, stephensi, sudaicus*, and the whole of the *punctulatus* group. The list would need to be revised in due course

International airfields should be classified according to the risk of anophelines invading aircraft on them', on the basis of evidence furnished by the government concerned and with the approval of WHO. The following classification might be adopted

(a) airfields free from anophelines that is, free from breeding places of anopheline vectors, within a radius of 5 km. If such breeding places are present within a radius of 10 km, all buildings on the airfield should be sprayed with residual insecticide,

(b) airfields free from anophelines of major importance (according to criteria of the preceding paragraph),

(c) airfields protected against anopheline invasion i.e. on which all airport buildings have been treated with residual insecticide and on which anopheline breeding has been controlled within a radius of 1 km

(d) airfields concerning which there is no definite indication regarding risks of anopheline invasion

### WHO Malaria-Control Activities

During the past years WHO malaria-control activities have been founded on a policy which has been shown to be effective. Wherever malaria-control demonstration teams have been sent out there has been a decrease in malaria, as indicated by the infant parasite rate which is the surest criterion for the assessment of results of any short term action. The committee emphasized

FIG 3 DISTRIBUTION OF TYPHOID AND PARATYPHOID FEVERS IN ITALY 1947-9

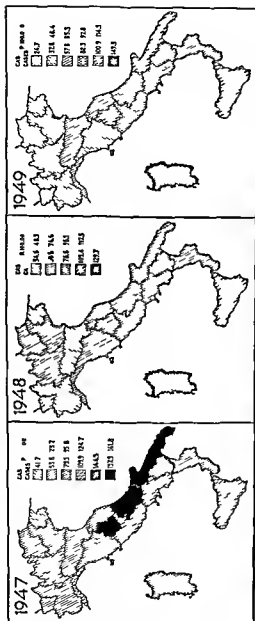
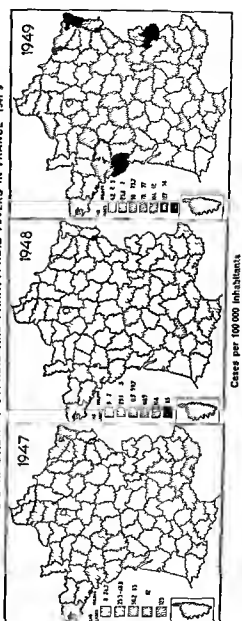


FIG 4 DISTRIBUTION OF TYPHOID AND PARATYPHOID FEVERS IN FRANCE 1947-9



therapy of malaria was reviewed. Some decisions were made with a view to detailed revision of the terminology employed in malariology as it was felt that such revision would contribute to standardization of methods of establishing epidemiological surveys

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## WORLD INCIDENCE OF TYPHOID AND PARATYPHOID FEVERS SINCE 1947

### Europe

Recrudescence of typhoid and paratyphoid fevers in Europe during the first postwar years gave rise to fear that these diseases might be spreading. In fact, after a period of regression, typhoid fevers again became 'a significant index of basic sanitary conditions', and the situation was then considered to be 'thoroughly unsatisfactory' <sup>1</sup>

By 1948, however, there was already a lull in the outbreak, and incidence of these diseases declined. This decline was accentuated in 1949 and 1950, as is seen in statistics published in the *Epidemiological and Vital Statistics Report* <sup>2</sup>

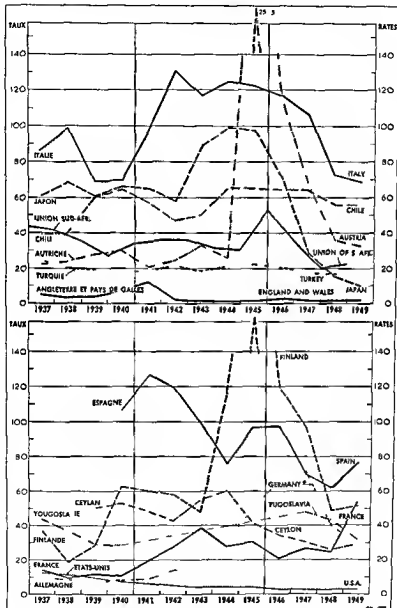
The total number of cases reported in Europe <sup>3</sup> fell from about 162 000 in 1947 to 124 000 in 1949. Cases for 1950 are estimated at about 105,000. It is true that the figures are still high in some large countries. For example, from January to November 1950 about 26 700 cases were reported in Italy where incidence from 1947 to 1949 had declined in nearly all regions (see fig. 3). In France an exceptionally marked recrudescence was observed in 1949, there being about 22 000 cases whereas in 1948 only about 10 000 cases had been reported (see fig. 4). Incidence decreased in 1950, the number of cases being about the same as in 1948. In the Federal Republic of Germany the decrease in incidence during the past few years has been particularly striking: about 32 000 cases were recorded in 1947 as compared with only 14 000 in 1949 (see fig. 5). The figures for 1950 will undoubtedly show fewer than 11 000 cases. In Spain there were approximately 20 000 cases in 1947 and about 21 600 in 1949 (see fig. 6). In various other countries where the situation is relatively satisfactory, such as Sweden and Switzerland the morbidity rate for typhoid and paratyphoid fevers is nevertheless higher than in the United Kingdom or in the USA. It would seem that in general there is still room for improvement

<sup>1</sup> Stowman, R. (1948) *Epid. Vital Stat. Rep.* 1: 166. see also Ch. on World Health Org. 1948 2, 68

<sup>2</sup> *Epid. Vital Stat. Rep.* 1950 3: 296

<sup>3</sup> Not including Portugal, Rumania, USSR and the Soviet Occupation Zone of Germany

**FIG 7 INCIDENCE OF TYPHOID AND PARATYPHOID FEVERS  
IN VARIOUS COUNTRIES 1937-49**



Cases per 100 000 inhabitants

1937 1943 old Reich 1946 1949 Federal Republic of Germany  
87 departments in 1940 1941 1942 and 1945 86 departments in 1943 and 1944

FIG 5 DISTRIBUTION OF TYPHOID AND PARATYPHOID FEVERS IN GERMANY 1947-9

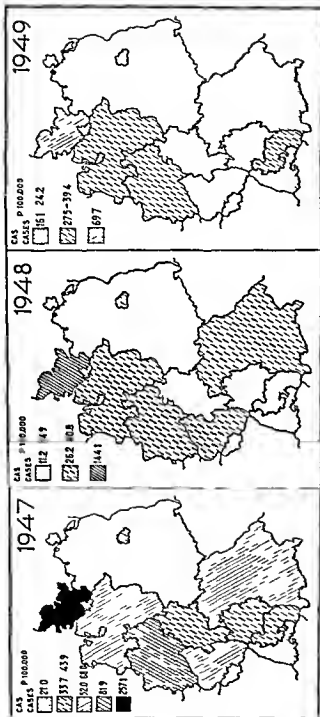
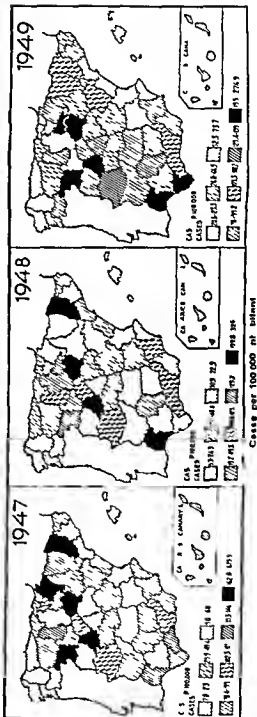


FIG 6 DISTRIBUTION OF TYPHOID AND PARATYPHOID FEVERS IN SPAIN 1947-9



Cases per 100,000 of population

## WORLD INCIDENCE OF POLIOMYELITIS IN 1950

In 1950 poliomyelitis incidence decreased in Canada and the USA as compared with 1949. On the other hand in Europe particularly in the British Isles and certain Scandinavian countries incidence was higher. Epidemic outbreaks were observed in Alaska, Australia, the Belgian Congo, Israel, Panama and Manila (Philippines). The disease was almost completely absent from Iceland, Mauritius and New Zealand where in 1949 it had assumed epidemic proportions.

This is the broad outline of the world situation with regard to poliomyelitis in 1950 as shown by the statistics received by WHO and analysed in the *Epidemiological and Vital Statistics Report*<sup>1</sup>. The study in question follows one which appeared previously on the evolution of poliomyelitis from 1947 to 1949.<sup>2</sup>

It should be pointed out however that the number of cases notified throughout the world is very small compared with actual incidence. This is also true of a number of other compulsorily notifiable diseases but it is particularly marked in the case of poliomyelitis since the non-paralytic forms of the malady may pass unobserved. It is obvious that the number of notified cases bears a closer relation to actual incidence in those countries where the disease has spread considerably during recent years such as the USA and the United Kingdom or where the system of case finding is more developed.

### Africa

The total number of cases notified was approximately the same as in 1949 i.e. about 1 200 although the disease progressed in several territories. Thus in the Belgian Congo the number of cases increased from 209 in 1949 to 492 in 1950; this latter figure represents about 40% of the total number of cases reported on the African continent. The province of Costermansville was particularly affected—another important focus with 140 cases developed in the province of Leopoldville.

An increase was noted in the countries of French North Africa (174 cases in 1950 as against 35 in 1949) and in Kenya. On the other hand incidence decreased in Mauritius (10 cases as compared with 362) Tanganyika and the Union of South Africa.

### America

In Canada and the USA there was a notable decrease in the number of cases—in 1949 2 437 cases were notified in Canada whereas in 1950 there

*Epid. m. It. I. St. t. Rep.* 1951 4 3

*Epid. m. It. I. St. t. Rep.* 1950 3 3 *see also Ch. W. Rd. Hl. h. Org.* 1950 4 307

in so far as the situation in Europe is concerned. New drugs which are being studied will undoubtedly contribute to such improvement.

### Africa

In the African countries in which there is a relatively high incidence—Algeria, Tunisia, Morocco, Madagascar, Mauritius—a decrease has been noted since 1947. On the other hand, the 7,110 cases with 814 deaths, reported in Egypt in 1949 represented the highest figure registered in that country for 25 years. In Kenya, the number of cases trebled from 1947 to 1949, reaching a figure of 1,240, with 113 deaths, in the latter year.

### America

The total annual number of cases—about 40 000 for the whole continent—hardly varied between 1947 and 1950. Although incidence increased in 1948 and 1949 in certain countries such as Colombia, it decreased in Costa Rica, Cuba, Haiti, Jamaica, Peru, and St. Vincent—mostly insular countries.

The USA has the lowest morbidity rate (about 4 000 cases in 1949 for 150 million inhabitants). In Mexico, a country of some 25 million inhabitants, there were more cases than in the USA (6,000 in 1949), and the number of deaths there equalled the number of cases in the USA.

### Asia and Oceania

In Japan there has been a considerable decrease in incidence. The annual average from 1939 to 1945 was about 47 000 cases, whereas in 1949 there were fewer than 9 000 cases with about 900 deaths. On the other hand, a recrudescence of typhoid fevers was noted in most of the countries for which information is available. During the 1950 period for which figures are given, notifications exceeded those of the corresponding 1949 period in the following countries and localities: Afghanistan, Ceylon, Shanghai (China), Cyprus, Hong Kong, Iraq, Iran, Israel, Federation of Malaya, Manila (Philippines), the Hashemite Kingdom of the Jordan, Singapore (city), Syria, Bangkok (Thailand).

In the Fiji Islands the number of cases reported increased from 35 in 1947 to 103 in 1948 and 222 in 1949 and then fell to 180 in 1950.

Fig. 7 gives some idea of the development of typhoid and paratyphoid fevers between 1937 and 1949 in the various countries of the world.

## WORLD INCIDENCE OF POLIOMYELITIS IN 1950

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### Africa

The total number of cases notified was approximately the same as in 1949, i.e. about 1,200, although the disease progressed in several territories. Thus, in the Belgian Congo the number of cases increased from 209 in 1949 to 492 in 1950; this latter figure represents about 40% of the total number of cases reported on the African continent. The province of Costermansville was particularly affected, another important focus with 140 cases developed in the province of Leopoldville.

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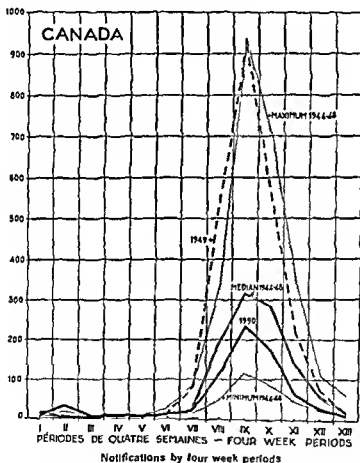
### America

In Canada and the USA there was a notable decrease in the number of cases. In 1949, 2,437 cases were notified in Canada, whereas in 1950 there



were only 706 (see fig 8) In the USA, 33,329 cases were reported in 1950 as against 42,173 in 1949 (see fig 9) The decrease was particularly marked in those States in which the morbidity rate was highest in 1949, i.e., North Dakota, South Dakota, Idaho, and Minnesota (see fig 10) However, there was no lowering of incidence in 19 States, in fact, incidence more than doubled in North Carolina, South Carolina Maryland, and Virginia

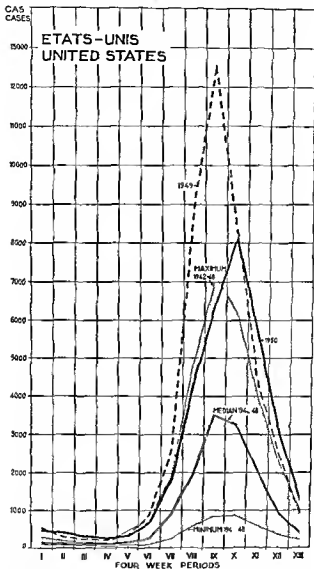
FIG 8 INCIDENCE OF POLIOMYELITIS IN CANADA  
1944-50



Although the data for the other American countries are not yet complete for 1950 incidence appears to have increased in the following territories and countries: Alaska, Chile, Costa Rica, Ecuador, Jamaica, Mexico, Nicaragua, Panama, Peru, Puerto Rico, Uruguay and Venezuela.

In Panama, there was an epidemic outbreak at the end of August 1950, and about 100 cases were notified during the last three months of the year as compared with a maximum of 9 during the corresponding period in the years 1945-9.

FIG 9 INCIDENCE OF POLIOMYELITIS IN THE USA  
1942-50

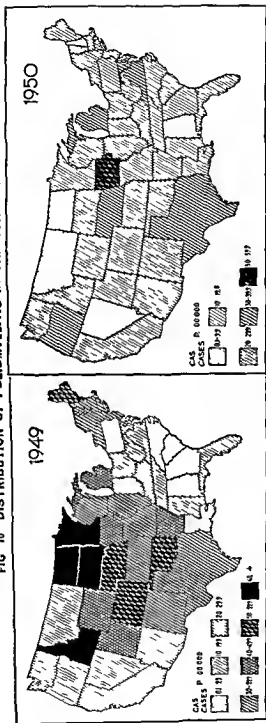


Notification by four week periods

### Asia

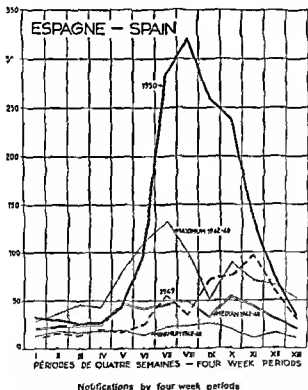
Little information is available—apart from data concerning a few towns—on poliomyelitis incidence in any of the large Asiatic countries except Japan where the number of cases in 1950 was about the same as in 1949 i.e. approximately 3 000

FIG 10 DISTRIBUTION OF POLIOMYELITIS IN THE USA 1948-50



In Israel incidence assumed epidemic proportions in the autumn of 1949 the monthly average of notified cases between October 1949 and March 1950 was 26 cases The maximum incidence was registered in May June and July 1950 Nearly all regions were affected About 95% of the cases were observed in children under five years of age and 70% in children less than two years of age The mortality rate was high

FIG 12 INCIDENCE OF POLIOMYELITIS IN SPAIN 1942-50



In Manila (Philippines) there was a marked increase in the number of notified cases which totalled 164 in 1950 There was an outbreak between 10 March and 6 May 1950 in Viet Nam

In India 900 cases were notified during the first eleven months of the year The epidemic outbreak in Bombay abated 421 cases had been notified between 1 January and 15 December 1949 from January to November 1950 there were only 115 cases

FIG 10 DISTRIBUTION OF POLIO MYELITIS IN THE USA, 1943-50

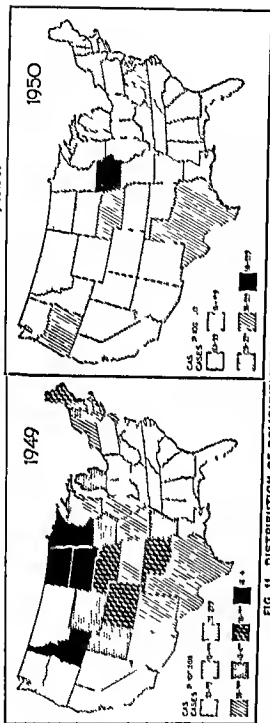
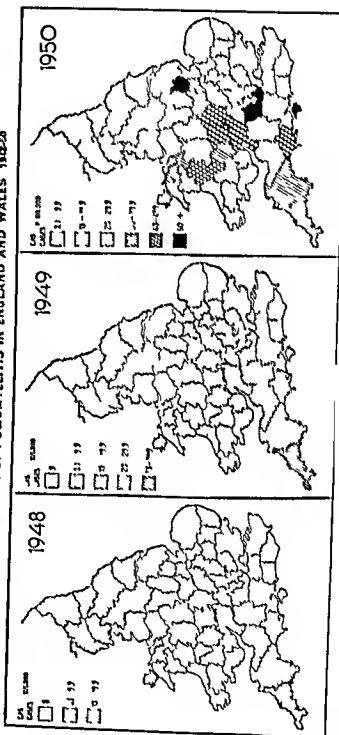


FIG 11 DISTRIBUTION OF POLIO MYELITIS IN ENGLAND AND WALES 1948-50



In France the disease has generally retained a diffuse endemic nature. In Spain the number of cases notified in 1950 represents a little more than twice the maximum observed during the course of the ten previous years: 741 cases in 1942 and 1 572 in 1950 (see fig. 12).

In the Federal Republic of Germany there were 2 831 cases in 1950 as against 1 733 in 1949. However these figures are less than those for 1947 and 1948 years during which very serious outbreaks of the disease were observed (more than 5 000 cases in 1948). In Austria, Belgium, the Netherlands and Switzerland the situation was definitely better than in 1949.

Northern Europe on the other hand suffered considerably. A very serious outbreak occurred in Denmark: 1 572 cases were notified in 1950 as compared with 323 in 1949 (see fig. 13). In Norway 700 paralytic cases were notified in 1950 as against 119 in 1949. In Sweden incidence decreased: 1 718 in 1950, 2 584 in 1949.

### Oceania

About 2 270 cases were notified in Australia—more than in 1946 or 1949, the years of maximum incidence since 1939. In New Zealand the number of cases fell from 321 in 1949 to 60 in 1950 for the period January to September.

From the information so far available it appears " that for the moment North America, the British Isles and the Scandinavian countries continue to be the principal foci of poliomyelitis. The future will show if it is necessary to include with this group such countries as the Belgian Congo, Israel, Panama, etc., where as far as it is possible to judge on the basis of the notifications for the first time it would appear that the disease has taken on an epidemic form.

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## FAO/WHO BRUCELLOSIS CENTRES

A good example of successful international co-operation may be found in the FAO/WHO brucellosis centres. These centres, which were established in 1950 and early 1951, are helping to co-ordinate the activities of WHO, FAO and the Office International des Epizooties (OIE) in addition to furthering research on problems relative to brucellosis.

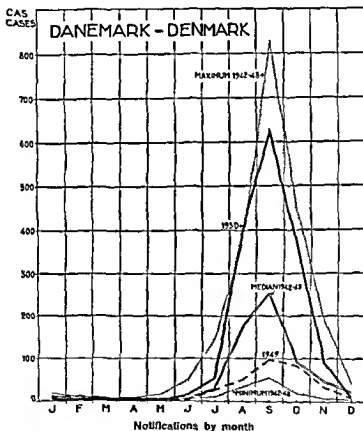
The centres now number 12 and are located in Argentina (Buenos Aires), Australia (Parkville, Victoria), Denmark (Copenhagen), England (Weybridge, Surrey), France (Montpellier, Hérault), Greece (Athens), Italy (Florence), Mexico (Mexico City), Turkey (Ankara), Union of South Africa

## Europe

"The number of notifications in the continent as a whole<sup>3</sup> (about 25 000 in 1950) represents an increase of 12% over the year 1949, and of 14% over the year 1948, but it is less than the maximum observed in 1947 (30,000). The greatest increases occurred in Northern Ireland, Norway, Scotland, Denmark and Spain.

During 1950, there was an increase of notified cases in the Federal Republic of Germany, Greece, Ireland, Malta, Spain, the United Kingdom,

FIG 13 INCIDENCE OF POLIOMYELITIS IN DENMARK  
1942-50



and several Scandinavian countries. In England and Wales 8 709 cases were declared in 1950 as against 6,866 in 1949 (see fig 11). Seventy per cent were paralytic cases. In Scotland the increase was still more marked: 1 189 cases in 1950 as against 216 in 1949. The same was true of Northern Ireland (316 cases as against 40) and of the Irish Republic (202 cases as against 78).

<sup>3</sup> Not including Bulgaria, Hungary, Poland, Portugal, Rumania, the Soviet Occupation Zone of Germany and the USSR, concerning incidence in which there is complete or partial lack of information.

## NEW WHO STATISTICAL PUBLICATION

Part I of the *Annual Epidemiological and Vital Statistics 1939 1946* has recently been published by WHO. This publication is a continuation of the *Annual Epidemiological Report* issued by the Health Organization of the League of Nations since 1923, the last volume of which containing statistics for the year 1938 appeared in 1941. Part I of the intended volume deals with vital statistics and causes of death. Part II containing corrected statistics of notifiable diseases is expected to follow shortly.

As is explained in the Introduction, this volume follows on the whole the pattern of the annual reports issued by the League of Nations. Part I supplies in respect of a large number of countries information on total area, latest available census results, estimated population, nuptiality, natality, fertility, gross and net reproduction rates, and general and infant mortality rates for the period 1921-1946, neonatal mortality rates for the period 1931-1946, and mortality by cause of death in 33 countries from the pre-war period up to 1946. Tables giving similar information for large towns are added, care having been taken to note when correction for residence has been made.

As within the period covered by this series, 1939-1946, the revised nomenclature for the international list of causes of death adopted in 1938 came into force, a comprehensive note explaining the changes incorporated into the abridged lists of 1929 and 1938 is also given, in order to facilitate the interpretation and eventually the comparison of the statistics based on these two lists.

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(Onderstepoort), USA (Minneapolis Minn) and Yugoslavia (Rijeka) It is planned to establish one additional centre in Latin America, and two in the Far East

Specific research projects, co-ordinated by WHO—with the collaboration of FAO and OIE—are under way at the various centres

*Project*

*Participating centres*

- |   |   |
|---|---|
| 1 Exchange of strains of <i>Brucella</i> , comparative testing of them according to procedures recommended by the Joint FAO/WHO Expert Panel on Brucellosis, <sup>1</sup> selection of the three type species of <i>Brucella</i> , these to be freeze dried and distributed to all the centres as reference strains | Montpellier, Weybridge, Minneapolis<br>(The US Bureau of Animal Industry Laboratory at Beltsville Md, is also co-operating in this project) |
| 2 Antibiotic sulfonamide and vaccine therapy in human brucellosis   | Mexico City, Montpellier, Minneapolis, Rijeka   |
| 3 Haemoculture in human beings, diagnostic procedures other than the sero-agglutination test  | Rijeka, Mexico City, Montpellier, Minneapolis   |
| 4 Sero-agglutination test in man and animals  | Montpellier, Weybridge  |
| 5 Standardization of antigens used in the milk ring test and application of the ring test in cattle   | Copenhagen, Minneapolis   |
| 6 Simplified production of strain 19 vaccine for cattle   | Weybridge   |
| 7 Improved diagnostic and vaccine procedures in sheep and goats (intradermic and milk-ring tests)   | Florence, Rijeka, Montpellier (Ankara and Buenos Aires to work on this also)  |
| 8 Local and regional surveys on prevalence of brucellosis   | All centres   |

Approximately \$8,000 was granted by WHO to various centres in 1950, particularly to those in Argentina, France Italy Mexico and Turkey UNICEF provided laboratory equipment and supplies for the centres in Italy and Yugoslavia This year a sum of \$2,000 has been allocated by WHO for the purchase of standard media dyes and antigens for distribution and use in all the centres

The brucellosis centres, and the national health administrations which they serve, are co-operating with WHO and FAO in such a way as to make their work an invaluable asset to the advancement of knowledge concerning brucellosis and its control

<sup>1</sup> *World Health Org. techn. Rep. Ser.* 1951 37 see also *Chron. World Health Org.* 1951 5 19

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# Reports from WHO Fellows

Many of the letters and reports received from WHO Fellows are of such interest that they deserve to be read by a wider public. They demonstrate more vividly than a series of facts and figures both the character of the fellowship programme and the response of the Fellows themselves. Selections from these reports are therefore published from time to time but it must be emphasized that the opinions expressed are those of the Fellows.

## Nursing in "Outback" Australia

*Mrs Maria P. Velono, WHO/UNICEF Fellow from the Philippines, made a 12 month study-tour of public health nursing services in New Zealand and Australia. In one of her reports Mrs Velono describes some of the unique and interesting medical services which she observed in Australia.*

Nursing in outback Australia means serving men, women and children in remote settlements, boundary riders and stockmen who live far from other human contacts for long periods and nomadic aborigines. In recent years various schemes have been devised to reach these people when they are in need of medical care.

### *Infant welfare by correspondence*

In 1932 Western Australia initiated an infant welfare correspondence plan by which a nurse gives advice on child care to mothers by mail. The Correspondence Sister now communicates with about 2 000 mothers every year. In addition she gives weekly broadcasts, writes articles for country newspapers and periodically visits her "patients."

### *Travelling baby-care centres*

The numbers of letters received by the correspondence nurse from various areas has helped to determine where permanent child-care centres should be established and where travelling centres may be utilized. Ten travelling centres have been instituted in Western Australia in the past 12 months. In the State of Victoria, a specially fitted three-ton caravan serves as a "clinic on wheels." The caravan visits 28 towns in a fortnight's rounds, enabling the nurses to see about 250 infants—weighing them, noting their progress and giving advice to the mothers. This service was originally financed by voluntary funds but is now partly subsidized by the Government and the municipal councils of the districts it serves.

### *Flying nurse service*

Since 1925 Australia has had a Flying Doctor Service to care for the inhabitants of sparsely settled areas. In 1946 the New South Wales section of the Service decided to appoint a trained nurse to assist the Flying Doctor. The duties of this nurse, as outlined in an official pamphlet published by the Service, are: (1) to engage in home nursing in approved cases; (2) to relieve nursing staffs in emergency cases at hospitals within the area of the Flying Doctor Service; (3) to give advice and help on matters of public health and the prevention of disease, including medical advice where necessary and antenatal and postnatal counsel; (4) to broadcast talks and speak before school groups; (5) to perform medical surveys and immunize children within the area; and (6) to visit,

eventually every homestead particularly those without radio or telephone communication. She works independently of but in co-operation with the Flying Doctor. While much of the nurse's travelling is done by land transportation emergency calls and long distance trips are made by aeroplane.

The flying doctor and nurse services are dependent upon "transceivers" an invention of a South Australian named Alfred Traeger. These special radio sets enable people to send and receive messages without knowledge of the Morse code. A "Morse Type writer" converts letters to signals. Each set costs from \$375 to \$525 but in special cases gift transceivers have been made available to those unable to purchase them.

Standard medical chests at a cost of about \$36 can be purchased from the Flying Doctor Service by all the residents of the outback. The steel chests are fitted with carefully numbered drugs and instruments so that the doctor when advised by radio of signs and symptoms can "prescribe by number."

In cases of accident and emergency the doctor flies to the patient and lands on the nearest landing strip. As many landing strips as possible are kept in readiness to facilitate the arrival of a doctor or nurse.

There are now seven flying doctors serving zones covering 2 000 000 square miles of country in which there are six main radio bases and small hospitals run by the Australian Inland Mission. The financing of the Flying Doctor Service is met partly by the users who pay according to a sliding scale based on their property holdings and the number of livestock which they have e.g. from \$15 per year for property supporting 3 000 sheep to \$60 for property with 17 000 sheep (note one head of cattle is equivalent to six sheep). The subscription takes care of the owner of the property his family employees and visitors. For people other than graziers the subscription rate is about \$15 for a family of three or more. Government subsidies and gifts assist in balancing the budget.

Mrs. Velono feels that she has gained much by observing medical service schemes such as these. In expressing her appreciation of her study tour she writes "As a whole I considered my stay very fruitful taking into account the wealth of information I have gathered in the visits of the various health agencies. These enriched me professionally and imbued me with optimistic plans that will be of great value to the Organization to which I am attached." The organization in this instance is UNICEF for which Mrs. Velono is Nurse Supervisor of the Child Feeding Programme in the Philippines.

## Notes and News

### Venereal Diseases

#### India

According to a recent report on the demonstration project which has been in operation in India for about two years <sup>1</sup> four complete teams—from Mysore, Madhya Pradesh, Himachal Pradesh and Punjab—are now under training at the Simla headquarters. This will bring the total number of teams trained at Simla to 14. Two seminars a week are held with the doctor and nurse trainees during which the nursing aspects of venereal disease control are discussed. In addition lectures are given on clinical laboratory and health aspects.

An increase in clinic attendance has been noted during March there were 217 new patients, bringing the total number of patients seen in the first three months of 1951 to 1 850

### Indonesia

A review of the progress of the antiyaws campaign in Indonesia<sup>2</sup> reveals that seven teams are now functioning in Jogjakarta four in Djakarta two in Ngandjuk and one in Bondowoso Laboratory personnel numbers seven one member of this staff completed training at the Simla training centre mentioned above

The records show that in the two former areas 404 069 persons representing 69.6% of the estimated population had been examined up to March 1951 69 602 cases of yaws representing 17.2% of the total number examined were found From 24 February to 24 March 16 546 injections of penicillin were given in Jogjakarta and 4 337 injections in Djakarta

The campaign in East Java was inaugurated on 12 March in Ngandjuk In this area treatment with neosalvarsan was given some 13 years ago records are still available which will make comparative studies possible

### Thailand

The demonstration teams working in Thailand<sup>3</sup> discovered 1 012 cases of yaws among the 6 584 persons examined during the month of February in the Rayburi area. In this area prevalence of yaws seemed to vary from 7.4% to 11.9% Plans are being made for the opening of an ante and postnatal clinic as part of the treponematoses project

The field teams were given refresher training courses at the end of February In training programmes are carried on for the nurses in the project in order to interest them in health education and public health procedures and a simple nursing manual has been written and translated into Thai

### Italy

A statistical report on the WHO/UNICEF prenatal and syphilis programme in Italy gives the following results as of the end of 1950

Serological examinations	pregnant women	15 613
Positive reactions		1 502 (9.6%)
Doubtful reactions		343 (2.2%)
Serological examinations	children	1 079
Positive		174 (16%)

## Publications

### New Monograph

The third in the *World Health Organization Monograph Series* has just appeared *Lutte antipaludique par les insecticides à action résistante* by Dr E. J. Pampana, Chief of the WHO Malaria Section This study issued only in French was originally published in Volume 3 Number 4 of the *Bulletin of the World Health Organization* and has been summarized in a recent issue of the *Chronicle*<sup>4</sup>

With the advent of residual-action insecticides such as DDT and BHC (benzene hexachloride) malaria control has been greatly facilitated In some countries where

<sup>1</sup> *Chron. World Hlth Org.* 1950 4 193 1951 5 6.

<sup>2</sup> *Chron. W. H. O.* 1951 5 61

*Chron. W. H. O.* 1951 5 86

it was formerly an historic scourge—Greece and Italy for example—it has ceased to be a public health problem. Dr Pampana reviews the malaria-control campaigns in progress in some thirty countries in four continents and gives valuable information on dosages of insecticides used, period of treatment, number of persons or habitations protected, cost of control per head of population and results of the operations. His is the first survey to give statistical evidence of the success of malaria control by means of residual action insecticides on a world scale.

This monograph, comprising 72 pages with 11 figures and 22 tables, may be obtained from WHO (Sales Section Geneva) or any bookseller through the sales agents listed on the back cover of all WHO publications at the price of 5/ \$1.00 Sw fr 4.00.

### *The Lamp is Lit*

There has been a widespread and increasing demand for popular and readable information for the general public on the aims and activities of WHO. An attractive illustrated booklet with a text written by Ritchie Calder, entitled *The Lamp is Lit*, has been prepared by the WHO Division of Public Information to help meet this demand. The English version of this booklet is now available; a French edition is in preparation and will be available within a few weeks; and editions in other languages are planned. The booklet will be on sale at a nominal price and may be obtained from WHO (Sales Section Geneva) or any bookseller through the sales agents listed on the back cover of all WHO publications.

### *La Presse Médicale*

The 16 May issue (Volume 59, Number 33) of *La Presse Médicale* is devoted to WHO and contains the following original articles on various aspects of the Organization's activities:

**La santé problème mondial** by Dr P. Dorolle, Assistant Director General of WHO—An introduction to WHO, its history, purpose and means of functioning.

**L'Organisation Mondiale de la Santé et la formation professionnelle dans le domaine de la médecine et de la santé publique** by Professeur J. Parisot, Doyen de la Faculté de Médecine de Nancy, member of the WHO Executive Board—A discussion of WHO's policy and activities with regard to the education and training of medical and public health personnel.

**L'Organisation Mondiale de la Santé et l'Enfance** by Professeur R. Debre, of the Académie de Médecine, Chairman of the Board of Directors of the International Children's Centre—WHO's role in promoting the health and welfare of children.

**La pharmacopée internationale** by Professeur R. Hazard, Professeur de Pharmacologie et de Matière Médicale à la Faculté de Médecine de l'Université de Paris—A description of the International Pharmacopoeia and WHO's work in preparing it.

**La lutte contre les maladies vénériennes et les tréponématoses par l'OMS** by Professeur M. De Laet, Professeur à l'Université de Bruxelles, Secrétaire général du Ministère belge de la Santé publique et de la Famille—WHO's activities with regard to treponematoses control.

**La standardisation biologique** by Professeur J. Trefouel, Director of the Institut Pasteur de Paris, membre de l'Institut et de l'Académie nationale de Médecine—History of attempts at biological standardization and WHO's achievements in establishing international standards for numerous substances.

**Le problème des stupéfiants synthétiques** by C. Vaillé, Chef du Service central de Pharmacie au Ministère de la Santé publique et de la Population, Paris, and G. Stern—The problem of addiction-producing drugs.

Summaries in English and in Spanish of all these articles accompany the journal.

	Number	Date of publication	Price
Plague Expert Committee on Report on the first session	11	October 1950	1/6 \$0.20
Prematurity, Expert Group on Final report	27	October 1950	9d \$0.10
Professional and Technical Education of Medical and Auxiliary Personnel Expert Committee on Report on the first session	22	December 1950	2/- \$0.25
Rabies, Expert Committee on Report on the first session	28	November 1950	1/6 \$0.20
Rickettsioses (African), Joint OIHP/WHO Study Group on Report on the first session	23	December 1950	1/3 \$0.15
School Health Services Expert Committee on Report on the first session	30	March 1951	2/- \$0.25
Tuberculosis Expert Committee on Report on the fourth session	7	April 1950	1/3 \$0.15
Report on the fifth session	32	April 1951	9d \$0.10
Unification of Pharmacopoeias, Expert Committee on Report on the fourth session	1	January 1950	9d \$0.10
Report on the fifth session	12	May 1950	9d \$0.10
Report on the sixth session	29	October 1950	1/3 \$0.15
Report on the seventh session (including report on the first session of the Subcommittee on Non Proprietary Names)	35	April 1951	1/6 \$0.20
Venereal Disease Control in the USA Report of the WHO Syphilis Study Commission	15	May 1950	3/6 \$0.45
Venereal Infections Expert Committee on Report on the third session	13	May 1950	1/6 \$0.20
Subcommittee on Serology and Laboratory Aspects Report on the first session	14	May 1950	2/- \$0.25
Report on the second session	33	April 1951	1/6 \$0.20
Yellow Fever Panel Report on the first session	19	August 1950	9d \$0.10
Zoonoses, Joint WHO/FAO Expert Group on Report on the first session	40	May 1951	2/3 \$0.30

### Bulk Orders

A discount of 20% will be given to health organizations for orders of 100 copies or more. Such orders should be sent direct to the World Health Organization Sales Section, Palais des Nations, Geneva, Switzerland.



# CHRONICLE OF THE WORLD HEALTH ORGANIZATION

## CONTENTS

*This double number of the Chronicle gives an account of the Fourth World Health Assembly held in Geneva from 7 May to 25 May 1951. The official proceedings of the Assembly including decisions and resolutions verbatim records of the plenary meetings and minutes and reports of the main committees will be published as Official Records of the World Health Organization No 35*

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## RECENT AND FORTHCOMING MEETINGS

1951

8 30 January	WHO Executive Board Standing Committee on Administration and Finance Geneva
22 January	WHO Executive Board seventh session Geneva
5 February	
30 January	Léon Bernard Foundation Committee Geneva
9 April-4 May	WHO Special Committee to consider the Draft International Sanitary Regulations prepared by the Expert Committee on International Epidemiology and Quarantine Geneva
10-17 April	Joint FAO/WHO Expert Committee on Nutrition second session Rome
19 28 April	WHO Expert Committee on the International Pharmacopoeia eighth session Geneva
30 April 1 May	WHO Expert Committee on the International Pharmacopoeia Subcommittee on Non Proprietary Names second session Geneva
7 25 May	Fourth World Health Assembly Geneva
18 May	WHO Regional Committee for the Western Pacific first session Geneva
28 29 May	WHO Consultative Committee for Europe first session Geneva
1 18 June	WHO Executive Board eighth session Geneva
30 July-4 August	WHO Expert Committee on Insecticides third session Savannah Ga
September	WHO Regional Committee for South East Asia fourth session Rangoon
18 21 September	WHO Regional Committee for the Western Pacific second session Manila
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5 November	WHO Expert Committee on the International Pharmacopoeia Subcommittee on Non Proprietary Names third session Geneva
12 17 November	Second Seminar for European Sanitary Engineers Rome
19 23 November	WHO Expert Committee on Drugs Liable to Produce Addiction third session Geneva
26-30 November	WHO Expert Committee on Trachoma first session Alexandria
December	WHO Expert Committee on Biological Standardization fifth session Geneva

## FOURTH WORLD HEALTH ASSEMBLY

The Fourth World Health Assembly was officially opened on 7 May 1951 by the President of the preceding assembly Rajkumari Amrit Kaur Minister of Health of India. In her opening address the Rajkumari expressed her faith in international health work and reviewed the achievements of WHO during the past year.

It was natural that thinking men should realize that there could be no happiness for the world until and unless we worked for or moved towards an integrated programme of international action for the promotion of human welfare. And in what sphere can this international action be more necessary than in the sphere of health? Health has often implied and I am afraid still implies to many people nothing more than physical well being and that well being too depending on the quality and quantity of medical care and attention available. But the medical world has I am glad to say progressed far beyond this narrow outlook. Not only is the preventive side of medicine being stressed today even more than the curative side but it is recognized that there can be no physical well being without mental and moral health. If we agree to this conception of health then I have no doubt that we can claim that the work of this Organization is second to none of all the specialized agencies of the United Nations if indeed it is not of prior importance.

"In spite of severely restricted finances WHO has during the past year been able to expand its services to Member States.

"The highlights of this expansion are the large scale yaws-control programmes launched with UNICEF assistance in Thailand and Indonesia and the drive against bejel in Iraq. A new venereal-disease-control team has taken the field in Egypt. An International Venereal Disease Commission for the Rhine has been instituted.

"New antimalaria projects have been launched or old ones continued in Iran, Palestine, India, Afghanistan, Thailand and Paraguay while other insect-control projects are in operation in British Honduras, Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua.

"Typhus control is being carried forward with WHO assistance in Peru and Afghanistan with great success.

The first WHO sponsored antituberculosis centre was opened in Istanbul during the year and Delhi and Trivandrum in India have also begun work.

"The first trachoma campaign was launched in countries of the Eastern Mediterranean Region.

Rabies is being combated by WHO in Israel and Iran and jointly with other agencies along the United States-Mexico border.

In the Americas several governments are receiving WHO assistance in attacking brucellosis.

Maternal and child health services are being expanded with WHO technical advice and UNICEF financial aid in Asian countries including Afghanistan, Burma, Ceylon, Formosa, India, Indonesia, Pakistan, the Philippines and other countries.

"All this is in addition to the carrying-on of programmes launched in previous years providing expert advisory services and the ever increasing activity in the technical services centred here at Geneva including the setting up of new expert committees."

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The Fourth World Health Assembly was marked by two significant features (1) the adoption of the new International Sanitary Regulations and (2) the introduction of technical discussions as part of the Assembly

### New International Sanitary Regulations

Adoption of the new International Sanitary Regulations represents perhaps the most important step yet taken by WHO since the Regulations have a direct bearing not only on measures of protection against pestilential diseases but also on freedom of international traffic. The new Regulations



FIG 1. Dr. L. A. Scheele, President of the Assembly, receives congratulations from the retiring President, the Hon. Rajkumari Amrit Kaur. Dr. Bock, Chairman of the Executive Board, is in the background.

attempt to take into account modern means of transportation and of disease control and to avoid as much as possible imposing unnecessary restrictions on the movement of passengers and cargo. Progress in rat and/or insect proof construction of ships and aeroplanes and in methods of rodent and insect extermination will eventually remove some of the restrictions and necessitate further modifications of the Regulations as was pointed out by Dr. M. T. Morgan, Chairman of the Special Committee which considered and gave final polish to the Regulations.

"The draft Regulations which you now have before you for adoption mark, I believe, a considerable step forward compared with the existing International Sanitary Conventions. They allow greater freedom to shipping and to aviation and no less to the vast commerce of passengers which is to be found at any moment upon the high seas or in

The Rajkumari paid tribute to two men whose deaths represent a loss to the Organization Dr Geraldo de Paula Souza,<sup>1</sup> of Brazil, who played an important part in the establishment of WHO, and His Excellency Khalil Bey, Under Secretary of State for Health of Egypt, who did much to further knowledge concerning bilharziasis

Dr René Sand, of Belgium received the Leon Bernard Foundation Prize at the Assembly<sup>2</sup> This prize, consisting of a medal and 1 000 Swiss francs, is awarded for practical achievement in social medicine in accordance with the provisions of an international subscription raised, under the auspices of the Health Committee of the League of Nations in memory of Professor Leon Bernard one of its most prominent members

Dr L A Scheele, Surgeon General of the US Public Health Service was unanimously elected President of the Fourth World Health Assembly Other officers were

Vice Presidents of the Assembly

Dr D A Dowling Australia

Dr A H Taba, Iran

Dr K Evang Norway

Chairman Committee on Programme

Dr M Jafar, Pakistan

Chairman Committee on Administration, Finance, and Legal Matters

Professor G A Canaperia, Italy

Chairman, Special Committee on International Sanitary Regulations

Dr M T Morgan United Kingdom

In his presidential address Dr Scheele expressed his appreciation of the confidence placed in him and his country by the Assembly

I interpret this confidence as placed not in me personally but in my country The United States of America firmly desires to continue its support of the World Health Organization to the end that the world may be a better and more healthful place for all of us We do believe that improvement of health in all parts of the world is one of the main roads to peace The world cannot remain half healthy and half sick and still maintain its economic moral and spiritual equilibrium The United States is fortunate in possessing a well developed public health and medical profession It is the belief of that profession that its knowledge and activities for the good of the people should be shared not merely by all parts of our own society but by people throughout the world There is today a very strong feeling of international understanding and solidarity among medical and public health people of all countries of the world The origin of this feeling of fellowship dates far back in history but it is only now through the World Health Organization that an opportunity has been given to translate fully the separate hopes of the people of individual countries into a combined and effective action "

<sup>1</sup> See page 194

See page 196

the air. But they do not in my opinion yet go far enough and I believe that it will not be long—within five years or ten years at the most—before an Assembly of this kind will be able to recommend to governments the deletion or at least the modification of quite a considerable part of the text of these Regulations. Some of the measures and conditions envisaged in the Regulations are indeed museum pieces which should have been scrapped years ago.

Controversial measures were discussed in the course of the sessions over the last three years of the Expert Committee on Epidemiology and Quarantine and during the consideration of them by the Special Committee. Adoption of the Regulations at the Assembly was unanimous and in accordance with provisions of the WHO Constitution and by decision of the Fourth World Health Assembly the new Regulations will become effective for all Member States by 1 October 1952 except for those States which send to the Director General notification of rejection or reservations.

To aid understanding of the new Regulations the Director General was instructed by the Assembly to prepare a memorandum interpreting technical and legal aspects of the various measures. The Assembly recognized the necessity for keeping the Regulations up to date and took a number of decisions to this effect. The Director General was vested with the authority of dealing with questions and disputes arising from the application of the Regulations and was requested to refer to the proper committee or other organ of WHO any questions or disputes which proved difficult to settle.

In the interest of freedom of traffic the Assembly recommended that the governments should whenever necessary and when health conditions permitted relax application to their territories of relevant articles of the Regulations.

An article describing the development of the new International Sanitary Regulations giving an account of the discussions concerning them and elaborating upon the decisions of the Assembly with regard to them will appear in a forthcoming number of the *Chronicle* the opening address of Dr P. Dorolle, WHO Deputy Director General at the first meeting of the Special Committee has already been published in full in a previous number<sup>3</sup>. The official text of the Regulations will shortly be available as *World Health Organization Technical Report Series* No. 41 and in *Official Records of the World Health Organization* No. 37 in which the proceedings of the Special Committee will also be included.

### Other Measures Against Epidemic Diseases

Discussions at the Assembly indicated that the delegates were aware of the need for protection against diseases in addition to those six covered by the new International Sanitary Regulations. Diseases such as dysentery, gastroenteritis and malaria must also be effectively controlled. The

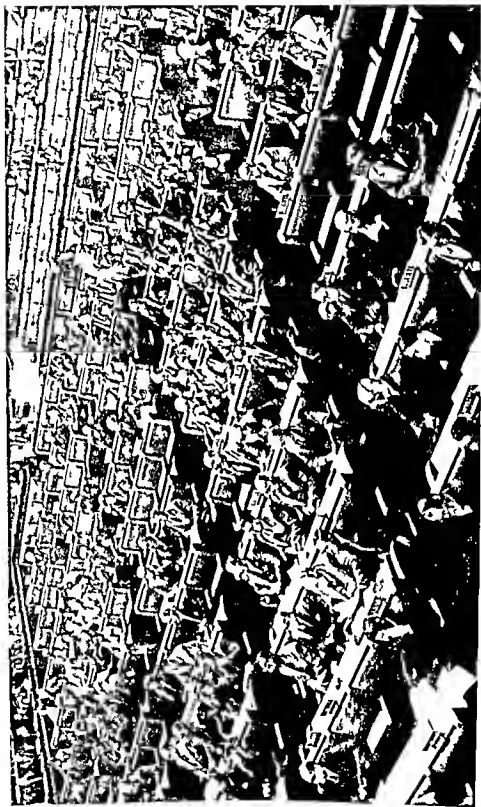


FIG 2 General view of one of the plenary sessions

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Assembly therefore decided that a joint WHO/ICAO (International Civil Aviation Organization) committee on the hygiene of airports should be set up to prepare sanitation standards appropriate for airports and to draft international conventions on this subject for additional WHO regulations. Member States were invited to do their part by improving environmental sanitation conditions in their countries, especially in and around airports.

Resolutions of the Assembly relative to the control of epidemic diseases also specified that

(1) the breeding of rodents, mosquito vectors of human diseases and ectoparasites should be eliminated and prevented ,

(2) sources of cholera infection should be eliminated by providing inter alia pure water and food supplies and facilities for the proper disposal of human wastes ,

(3) the level of protection against diseases such as plague, cholera, yellow fever, smallpox and typhus should be raised by vaccination or other means



FIG 3 Members of the Brazilian and Burmese Delegations at one of the committee meetings

The Assembly discussed the health risks involved in certain mass movements of populations—refugees, pilgrims, etc.—from the standpoints of the populations in movement and of those in countries to which they go or through which they pass. The Executive Board was invited to initiate a study of measures for the protection of populations in mass movements.

and for the prevention of international diffusion of quarantinable diseases through such movements

Isolated communities confront epidemiologists with special problems delegates at the Assembly realizing that these communities require measures other than or in addition to those specified in the International

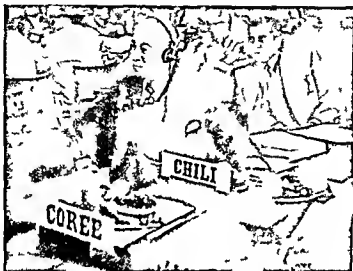


FIG 4 The Chilean Delegation at a committee meeting

Sanitary Regulations discussed possible means for protecting them against epidemic diseases. It was suggested that health administrations might with respect to such isolated communities be permitted to impose additional sanitary regulations provided WHO has been notified of these communities as being subject to special risk and has approved of their being considered as such. *The Organization will in turn notify all other health administrations of its approval.*

International traffic endangers certain territories from the standpoint of importation of communicable and epidemic diseases which gives considerable importance to epidemiological intelligence services. The Assembly requested that the Executive Board examine the adequacy of present arrangements for the collection and analysis of epidemiological information concerning diseases other than those covered by the new International Sanitary Regulations. The Board is to study ways and means of coordinating WHO activities regarding such epidemic diseases and if necessary to modify the terms of reference of the Expert Committee on International Epidemiology and Quarantine.

## Technical Discussions

The technical discussions on the subject of Education and Training of Medical and Public Health Personnel, suggested by the Executive Board at its sixth session<sup>4</sup> were presided over by Professor J Pansot, Dean of the Medical Faculty of Nancy, France. Dr R Sand, of Belgium served as Rapporteur. Three working groups were formed to facilitate discussion. Sir Arcot Mudaliar, Vice Chancellor of Madras University, India headed a group which studied undergraduate medical education, Dr G W Anderson, Director of the School of Public Health at the University of Minnesota, USA, guided discussions concerning specialist training in public health, and Mrs Aung San, Director of Women's and Children's

Welfare Services in Burma, led a group which considered the training of auxiliary personnel.

General satisfaction with the discussions was expressed. For example Professor J Pansot spoke of the attendance at the discussions and of the value of the information contained in the reports of the debates.

We are sure that the Director General will find that it [the documentation] contains information of the greatest value and that the final reports of our discussions will be of considerable help to him in his future action.

"Each of the delegations present will take away a large file in which will be found useful information."

"I am sure that my colleagues have appreciated this opportunity to exchange opinions on a subject which they all have at heart in discussions without official character and totally independent of all administrative and budgetary considerations."

"The figures speak clearly for the interest which these technical discussions aroused: there were nearly 150 persons present at the general meetings and between 25 and 50 at each meeting of the working groups."

Dr K. Evang stressed the opportunity which the Health Assemblies afford experts in health to exchange opinions on technical matters.

"I feel that we should try to build upon the experience thus gained and should develop this programme further each year the most prominent health administrators



FIG 5. Professeur J Pansot who presided over the technical discussions.

of the world with technical knowledge and competence in the field of health will gather. This is a unique opportunity for exchanging opinions on technical matters."

Sir Arcot Mudaliar testified as to the high level of the discussions and the interest shown by the participants.

"As one who was intimately connected with one group I can say without any fear of contradiction that the high level of discussions and the great interest that was taken by all delegations who participated including some non governmental organizations was indeed a matter of gratification to all of us who are interested in the promotion of technical discussion at the Assembly of the World Health Organization."

The Assembly resolved that technical discussions should be a part of future Assemblies and instructed the Executive Board and the Director General to select a suitable subject for the Fifth Assembly. An article on the discussions of the Fourth Assembly will appear in a forthcoming number of the *Chronicle*.

### Programme

Turning to its principal task the adoption of a programme and budget for the year 1952 the Fourth World Health Assembly approved with certain amendments the proposals set forth in *Official Records of the World Health Organization* No 31.

Dr P. Dorolle, Deputy Director General of WHO, in an introductory statement regarding the programme called attention to the need for a new orientation in policies of the Organization on the bases of experience gained and of new factors such as the development of international health activities resulting from bilateral or multilateral agreements and financed from a number of different sources. This development had led the Director General to present a programme which would be co-ordinated by WHO but financed by other bodies in addition to the regular programme and budget. The co-ordinated programme comprised three parts:

- (a) projects to be financed by the regular budget of WHO
- (b) projects whose execution was anticipated as a result of services which UNICEF would be able to render to a certain number of governments
- (c) projects which were to be financed by funds made available to WHO within the framework of the expanded programme of technical assistance for economic development undertaken by the United Nations.

The regular programme had been established along the general lines laid down in the four year plan approved by the Third World Health Assembly and elaborated by the Executive Board. The six priorities had been revised in the light of the actual situation from the standpoint of six regional organizations. The Organization was now in a better position to determine the needs of individual countries and to plan projects accordingly.

The proposed programme for 1952 gave special attention to projects of an educational nature, in an effort to increase the numbers of qualified personnel, to raise standards of professional training and to secure better adaptation of curricula to the needs of the various countries as well as to the conditions with which the different categories of personnel would be faced

The programme had been drawn up with three factors in mind co-ordination of activities financed from various sources, decentralization of the means of investigation and action and concentration of effort on the points where the services could be most effective Dr Dorolle expressed



FIG 6 The Egyptian Delegation

the hope that it would not be forgotten that the programme assumed its true significance only when considered in the framework of continuous development he suggested that a fourth factor continuity should therefore be added to these three

The consideration of specific points of the programme was preceded by a general discussion in which delegates from many countries expressed their views of the present approach of WHO with regard to public health problems at an international level Dr M Jafar Chairman of the Programme Committee summarized the discussion and reiterated the more important points among which were the following

(1) It was felt that the need for supplies for the programmes of under-developed countries should receive special attention and that future

programmes should be planned with some flexibility so that urgent needs could be met. WHO might also be able to provide facilities for obtaining currency in cases where currency problems prevented underdeveloped countries from buying the supplies they needed.

(2) Regional programmes would have greater chances for success if planning and implementation were done at a regional level.

(3) It now seemed that priorities had been established at too early a stage in the Organization's development and that in view of the policy of decentralization which had been adopted priorities should be laid down again this time in accordance with regional requirements.



FIG 7 Members of the Is aell Delegation

(4) Preventive activities giving early and demonstrable results should be stressed in health programmes. For example, improvement in environmental sanitation would greatly reduce the incidence of certain diseases.

(5) Since the success of all health programmes depended on qualified personnel, WHO should give the strongest possible support to health institutions.

The programme adopted for 1952 is based to a considerable extent on these principles and on the fundamental concepts developed by WHO during the last two years and outlined by the Director General in his statement to the Standing Committee on Administration and Finance of the Executive Board published in a previous number of the *Chronicle*.<sup>6</sup>

(1) progressive decentralization in the activities of the Organization, (2) close co operation with other specialized agencies of the United Nations resulting in joint projects of wide scope, particularly in technical assistance to underdeveloped areas, and (3) a recognition of the importance of helping governments to help themselves in establishing permanent and effective public health organizations, rather than offering assistance of a temporary nature on specific problems

As in previous years the programme for 1952 reflects the basic organizational structure of WHO Centrally, the Organization will continue to perform those functions which can be assumed only by an international organization the establishment of new international standards for biological substances epidemiological intelligence service, collection and dissemination of statistical data continued efforts to establish and promote an international pharmacopoeia for use of all Member States, participation in the international control of habit forming drugs dissemination of medical information by means of publications, etc Regionally, and at the national level the Organization will continue to provide assistance in the form of fellowships expert consultants demonstration teams and travelling seminars Emphasis will be placed on those diseases which were recognized by previous Assemblies as major public health problems — malaria, tuberculosis and venereal diseases — but attention will also be given to diseases of lesser importance from the global viewpoint but constituting major problems in certain regions Trachoma in particular was the subject of an Assembly resolution it was noted that arrangements had been made to convene an expert committee on trachoma in 1951, and the Director General was invited to bear in mind recommendations of this committee when considering the programme and budget for 1953

Medical supplies for Member Governments a subject of controversy at previous Assemblies, was again a question on which varying opinions were expressed Several delegations claimed that certain countries were not able to carry out effective public health projects because of lack of medical supplies The Health Assembly requested the Executive Board to review the feasibility of providing further services in connexion with medical supplies to governments on request

Another subject which is to be included in the regular programme of WHO at the instigation of the Assembly is dental hygiene The Assembly requested the Executive Board and the Director General to start dental health activities as soon as possible in connexion with demonstration projects and to encourage the training of dental health personnel through the WHO Fellowship programme

The problems of supply of insecticides and of prevention of intoxication caused by their use were considered by the Assembly The use of insecticides in public health projects is providing effective protection against insect borne diseases to very large populations with regard to malaria for

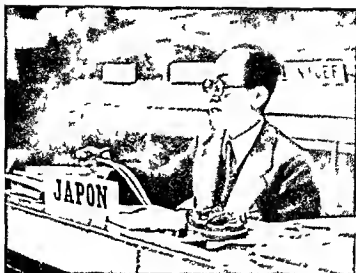


FIG 8 One of the delegates from Japan new member of WHO

example insecticides are safeguarding the well being of at least 70 000 000 people

The present critical situation in the world supply of chlorine based insecticides endangers a number of public health projects. The Assembly therefore (1) directed the attention of all governments to the grave repercussions on world health which will follow any interruption in activity resulting from a diminution in the quantity of insecticides available for health programmes (2) called on all users of insecticides to exercise the utmost economy consistent with technical efficiency and (3) urged governments of countries where the means of production exist to take vigorous action to

(a) make raw materials and other services available to the producers of chlorine based insecticides to an extent sufficient to enable existing productive capacity to be fully employed

(b) make arrangements with producers for priority to be granted to requests for such insecticides for health purposes in other countries immediately after their own most pressing needs have been satisfied

(c) facilitate in every way the export of these insecticides for health programmes

In addition the Assembly requested that the United Nations through its Economic Commissions arrange for a study of this problem and make recommendations to governments and inter governmental bodies concerning methods which might be applied to alleviate the present shortage and ensure that the best possible use is made of existing supplies. The



Director General was instructed to continue his efforts to bring about an increase in the world availability of insecticides for public health purposes and to co operate with all other inter governmental agencies concerned with the problem

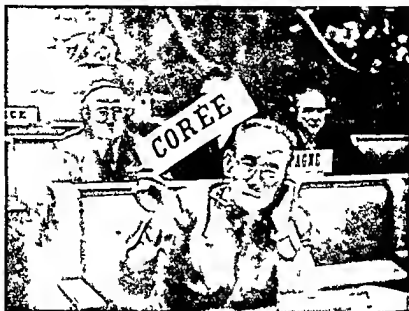


FIG 9 The delegate from Korea

Recognizing that there are some insecticides which are highly toxic to human beings and animals the Assembly requested the Executive Board and the Director General to collect information in co operation with ILO and FAO regarding measures to be taken to promote safe use of such preparations

Other decisions of the Assembly included the following

(1) From 1 June 1951 WHO will assume the functions of the Permanent International Pharmacopoeia Secretariat, a function which was held hitherto by the Belgian Pharmacopoeia Commission

(2) The Director General was requested to ask the International Anti venereal disease Commission of the Rhine to include in its annual report to the Executive Board the number of new cases of venereal diseases reported among the boatmen and members of their families and crews classified according to the port in which the infection was contracted

(3) The Director General was requested to draw the attention of governments and the International Committee of the Red Cross to a joint FAO/WHO study on Prevention and treatment of severe malnutrition in times of disaster which will appear as No 45 in the *World Health Organization Technical Report Series*

(4) The Director General was requested to provide technical assistance to governments on request in planning projects relating to the control of utilization of water and the development of arid land and to co operate with the United Nations and other specialized agencies concerned with such projects

(5) The Director General was authorized to continue co operation with the United Nations Relief and Works Agency for Palestine Refugees in the Near East on the same basis as hitherto until dissolution of the agency

(6) The Executive Board and the Director General were requested to review the policy of WHO with respect to the co ordination and promotion of scientific research pertaining to health

(7) The World Medical Association was requested to consider measures to facilitate the resettlement of refugee physicians and the problems arising from the lack of reciprocity in medical licensure for these physicians. The Assembly recommended to Member States and their medical associations the adoption of such measures as would enable the services of duly qualified medical personnel acceptable to them to be satisfactorily utilized

(8) Recognizing the importance of improvement of environmental hygiene and sanitation as an essential part of public health programmes the Assembly recommended to Member States that appropriate provisions should be made to train and to employ in their health administrations adequate numbers of public health engineers town planners architects and other allied personnel. The Executive Board and Director General were requested to give to Member States all possible help to create the necessary training facilities

### Budget

Three different proposals were put to the vote at the Assembly concerning the budget for 1952 the first by the Director General for a working budget amounting to \$8 379 653 the second by the Executive Board \$7 677 782 and the third by the United Kingdom \$6 692 982

The Director General presented the case for a large budget

" 1950 was a year of building of progress in the Organization. One cannot say the same for 1951. It is true that certain progress will be made this year but the budget, the total budget, the regular budget of the World Health Organization for 1951 is less than for 1950—this in the face of considerably raised prices and costs in the face of the necessity for within grade increases in salaries for necessary home leave for the staff of the Organization greatly increased over the early years of WHO—so that the actual money available for services of the Organization in the regular budget will be very considerably less this year than last year. In other words in many fields of the work of the Organization this is not a year of progress but a year of regression a year of retreat from responsibilities

In the present situation the World Health Organization is having to refuse to undertake many responsibilities which it is expected to assume by the United Nations by other specialized agencies and by other inter governmental and non governmental organizations

We are finding it not possible to attend many meetings at which the World Health Organization should be represented because the money simply is not available

After only two and a half years of life the Organization then has suffered a sharp setback—a cut in its 1951 programme. This is serious but it is still possible to repair the damage that is being done and will continue to be done this year to the responsible position of the World Health Organization

In 1951 the Organization should have begun to reap the benefit of its organizational pattern but it is doing so only to a minor degree and it will not be possible to reap the benefit of that pattern this year

The decentralized pattern the regionalized pattern is an expensive one. At a level of approximately \$6 000 000 it does not begin to pay off and it does not become economically sensible at a level below 8 or 8½ million dollars

At the present time the overhead is too high. The housekeeping costs too much. An excellent machine has been built but there is not enough fuel with which to run it. Too high a percentage of the money available to the Organization necessarily under these circumstances has to go into organization and staff and not a high enough percentage can go into the work of the World Health Organization in the countries which need that work

This then is a crucial moment for the Organization at its Fourth World Health Assembly. This is a time at which the future course of the Organization will be determined because of the responsibilities that appertain to it by virtue of the Constitution and by virtue of the acceptance of these responsibilities by other agencies and widely throughout the world. If these responsibilities are not assumed by the World Health Organization they will be assumed by other organizations. The co-ordination that is



FIG 10 The delegates from Liberia

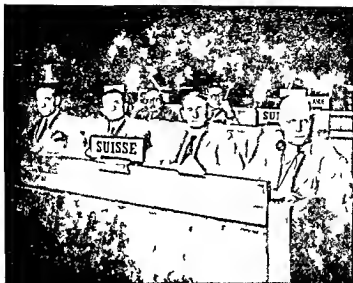


FIG 11 The Swiss Delegation

so important and to which attention has been called repeatedly by the United Nations General Assembly and Economic and Social Council will to a considerable extent break down "

The proposal for a large budget was strongly supported by the Chief Delegate of India Rajkumari Amrit Kaur and by the delegations of Ceylon Iraq Israel Norway the Philippines and Viet Nam Other delegations such as those of Australia Canada and New Zealand favoured the proposal of the United Kingdom for a budget of approximately \$6 700 000 It was pointed out that the United Nations General Assembly had recommended that the specialized agencies stabilize their budgets and that States which participated fully in the work of the United Nations and all or most of the United Nations specialized agencies had already had to carry a heavy financial burden Furthermore attention was called to the fact that a substantial additional source of income for international health work had become available through the United Nations Technical Assistance Programme

As a compromise between these two views the Assembly adopted the proposal of the Executive Board for a total of \$7 677 782 to constitute the working budget of the Organization for 1952

### Membership and Organization

The Fourth World Health Assembly admitted three new Members to the Organization the Federal Republic of Germany Japan and Spain

It was noted with regret that Poland had notified the Director General of its wish to withdraw from WHO but the Assembly took no action other than to indicate the Organization's willingness to welcome resumption by Poland of full co-operation in the work of WHO

The Assembly decided that postponement of the first meeting of the Regional Committee for the Western Pacific should be terminated and the meeting held in May 1951 at Geneva Cambodia, Laos and Viet Nam which were temporarily included in the South East Asia Region now form part of the Western Pacific Regional Organization

A request from the French Government that Morocco, Tunisia and the French Departments of Algeria be included in the European Region was referred to the Executive Board for study a report on this study is to be submitted to the Fifth World Health Assembly

#### Future Assemblies

It was decided that the Fifth World Health Assembly should meet in Switzerland and that the Executive Board should examine the question of where the Sixth and future Assemblies should be held and report to the next Assembly

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### TRIBUTE TO Dr de PAULA SOUZA

Delegates at the Fourth World Health Assembly paid unanimous tribute to Dr G H de Paula Souza of Brazil who died just a few days before the opening of the Assembly Dr de Paula Souza was in the words of Rajkumari Amrit Kaur one of the founding fathers of WHO It was he who as Brazilian delegate to the United Nations Conference at San Francisco in 1945, was responsible for the inclusion of the concept of health in the Charter of the United Nations and who in a joint proposal with the delegation of China asked that an international health conference be convened Subsequently he participated in the Technical Preparatory Committee for the conference in the conference itself in all sessions of the WHO Interim Commission in meetings of the Executive Board and in the World Health Assemblies

Dr de Paula Souza was born on 5 July 1889 in the State of São Paulo Brazil His technical education began in São Paulo where he studied pharmacy and chemistry Later he studied at the Universities of Berne (Switzerland) and Munich (Germany) received the degree of Doctor of Medicine at the University of Rio de Janeiro and was awarded the degree of Doctor of Public Health at the School of Hygiene and Public Health

at Johns Hopkins University Baltimore Md USA where he was a member of the first graduating class

His public health career was both practical and academic both national and international From 1914 to 1918 he was an Assistant at the São Paulo Medical School and simultaneously Head of the Tuberculosis Laboratory of the São Paulo Tuberculosis League He was appointed Assistant Professor of Hygiene at the School and in 1922 became a full professor At the same time from 1922 to 1927 he served as Director of the Public Health Service of the State of São Paulo in which capacity he introduced many reforms into the public health administration of Brazil In 1924 he created the first health centre in Brazil and later a number of rural health centres From 1927 to 1929 he was a member of the Health Section of the League of Nations He then became Director of the Institute of Hygiene of São Paulo which in 1932 was transformed into a School of Public Health with Dr de Paula Souza continuing as Director From 1944 to 1946 he was Chief of the Epidemic Control Section in the Health Division of the United Nations Relief and Rehabilitation Administration (UNRRA) Concomitant with his international health work Dr de Paula Souza retained his post as Director and Professor of the Faculty of Hygiene and Public Health at the University of São Paulo



FIG 12 Dr G H de Paula Souza

In the course of his rich and varied public health career Dr de Paula Souza served many health organizations and received numerous honours WHO benefited greatly from his interest and his wise counsel and unfailing assistance will be sorely missed

Paying tribute to him Rajkumari Amrit Kaur spoke of Dr de Paula Souza's service to WHO of his contributions to the public health services of his native Brazil and of the personal qualities which made him an international leader in public health

"His interest in WHO was unflagging he participated in all the sessions of our Interim Commission was appointed and reappointed to the Executive Board attended every Health Assembly and gave unstintingly of his time and great experience to the organization he had helped to create He was called on for further duties and it is a tribute to the wide range of interests and capacity of this great man that he was able to

contribute to no less than three expert panels of the World Health Organization and advised on international epidemiology and quarantine on technical education and on public health administration

His achievements in the field of public health in Brazil where he created his famous School of Public Health and Institute of Hygiene in the early 1920's would in themselves be enough to deserve our admiration. He has trained several generations of public health specialists and was the cornerstone of his country's health service.

No tribute to this dear colleague of ours would be complete if we failed to mention his great modesty, his delightful courtesy and great kindness, his unfailing good temper, his personal courage and integrity. To his many friends at home and abroad, to his colleagues, to his wife and daughter, whom many of us had the pleasure of seeing here last year, may I be permitted in the name of all of us to express our deep sense of personal loss and our undying gratitude to him as a leader in public health the world over, a founder and tutor of the World Health Organization and a friend."

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## AWARD OF THE LÉON BERNARD FOUNDATION PRIZE

Rajkumari Amrit Kaur, Acting President at the early sessions of the Assembly, introduced Dr. René Sand of Belgium, who was selected by the Leon Bernard Foundation Committee to receive the Prize awarded for achievements in social medicine. The Rajkumari explained WHO's role in making the award and reviewed Dr. Sand's career.

In implementing the provisions of the Statutes of the Léon Bernard Foundation as modified by the First and Third World Health Assemblies, the World Health Organization continues a function established in 1934 by the Health Committee of the League of Nations in memory of one of its most prominent members, Professor Léon Bernard. The first and only other recipient of this honour is Dr. Wilbur A. Sawyer to whom the award was made in 1939.

Dr. René Sand was born in 1877 and from 1945 until his recent retirement he held the Chair of Social Medicine created in 1945 in the University of Brussels with the support of the Rockefeller Foundation. He also lectured in social medicine at the School of Criminology of the Law Faculty and at the Faculty of Social, Political and Economic Sciences and from 1949 at the University Nursing School where he also lectured on social work in Belgium and elsewhere. Dr. Sand was responsible for the opening of the Institute of Hygiene and Social Medicine in Brussels in June 1949 and has gathered together there much documentation and a library on social medicine. The Institute and its library have contributed towards a better understanding of social medicine not only by the medical profession but by national authorities.

Dr. Sand has taken an active part in organization of health services in Belgium and has contributed much to the establishment and development of the Section on Preventive Medicine of the University of Brussels. He is Vice President of the Belgian Social Medicine Association which he founded in 1912 and he is also the founder of the Belgian Committee of Social Work.

In the international sphere Dr. Sand presided in Paris in 1946 over the Technical Preparatory Committee charged by the Economic and Social Council of the United

Nations with the study of proposals concerning action and international organization in the health field. He was one of the delegates of the Belgian Government to the Health Conference called in New York in the summer of 1946 by the United Nations to draw up the Constitution of the World Health Organization and the diplomatic acts creating this organization. In February 1950 Dr Sand was Chairman of the WHO Expert Committee on Professional and Technical Education.

"He founded the International Conference of Social Work in the years before the war. A large part of the work of these conferences is devoted to medical social problems. When the war was over he was instrumental in the revival of these conferences. In 1947 he was Chairman of the Special International Conference held in Scheveningen on urgent problems in war-devastated areas and in 1948 he was Chairman of the Fourth International Conference of Social Work in Atlantic City and New York. He asked to be relieved of this function but in 1950 took part in the Fifth International Conference of Social Work in Paris as Honorary President. He is President of the International Committee of Schools of Social Work and after the war contributed to the re-establishment of the International Hospitals Association of which he was one of the founders and the first President.

"Many people outside Belgium have had the pleasure of hearing him lecture on social medicine. He has delivered lectures in many of the countries of Europe.

"Since 1945 Dr Rene Sand has published three books and numerous articles. The books are *Un programme de santé pour la Belgique* (1945) the important treatise entitled *Vers la médecine sociale* in 1948 which is an historical summary of the groups of social medicine and a definition of its contents aims and methods and in 1950 *La médecine sociale*. Since 1945 his articles cover a wide variety of subjects from *Le Rôle Social du Médecin* *Les progrès réalisés par la médecine sociale depuis vingt-cinq ans* and *What is Social Medicine?* to such subjects as the teaching of biology in social service schools the use of statistics as a means of research in medicine and the influence of heredity on mortality."

Dr A Stampar acting on behalf of the Executive Board submitted to the Assembly the resolution of the Board that the Prize be awarded to Dr Sand. The resolution was approved by acclamation.

In accepting the award Dr Sand paid tribute to all those who had provided inspiration to him in his work and spoke of the importance of the principles of social medicine in teaching research and clinical practice.

Ladies and gentlemen the kind words of your President and of Dr Stampar and your applause add to my gratitude and at the same time to my confusion gratitude because the Leon Bernard Prize is the highest honour to which a hygienist can aspire by reason of the greatness of the person to whose memory it is dedicated the authority of those who award it and the merits of its first holder Dr Wilbur Augustus Sawyer confusion because having reached the age of sincerity I realize how modest is my contribution by the side of that of the conqueror of yellow fever and those of so many other health workers.

"What little I have been able to do I owe to those who have inspired me by their teaching and example first of all to Leon Bernard himself—clinician and hygienist, scientist and man of action and apostle of social medicine to the development extension and practical application of which he made so great a contribution. Seventeen years ago he was taken from us at the height of his career. I can still hear him giving one of his incomparable lectures at the *Cours international d'Hygiène* or guiding with his unfading judgement and his eloquence the debates of the Health Committee of the League of Nations. Although the years did not allow him to see its birth the world



organization in which we are joined together is the offspring of his own thought, which he would recognize in its Charter of Health

Next I would pay tribute to Ernest Malvoz, who founded Belgium's first tuberculosis and venereal-disease dispensaries and to whom the miners of the Liège region owe their complete freedom from ankylostomiasis which used to afflict one worker in three. His success was achieved by the health education of public authorities, workers' organizations, and employers' groups—an essential method of social health work.



FIG 13 Dr. R. Sand, recipient of the Léon Bernard Foundation Prize

"I must likewise mention William Henry Welch, agent of human progress in the most varied aspects of physical and mental health, whom I knew full of life and activity at the age of 80 years.

"I have also learned much from Sir Arthur Newsholme and Sir George Newman, pioneers of the modern public health organization in the United Kingdom and authors of works as interesting as they are authoritative. They prepared the way for the setting up of Chairs of social medicine which Sir John Ryle at Oxford made famous by a labour he knew would shorten his life.

"I would also recall Alejandro del Rio, first Minister of Health and

founder of the first social service training establishment in South America, from whose erudition and experience constantly enlarged by travel and international contacts I benefited daily during my two months in Chile.

"I recall too one whose recent death has been so grievous a loss to us—Geraldo de Paula Souza, founder of the Faculty of Hygiene at the University of São Paulo, a tireless organizer everywhere known and liked.

And so many others: Richard Clarke Cabot, Milton J. Rosenau, and David C. Edsall at the Rockefeller Foundation; George E. Vincent, Abraham Flexner, Wickliffe Rose, and Selkirk M. Gunn in Europe; the brilliant Julius Tandler and the refined spirit which was Etienne Burnet.

"But social medicine is not the prerogative of men, and I would recall here what it owes, and what I owe to the brilliant work of Lillian D. Wald, Julia C. Lathrop, Grace Abbott, Juliette Delagrangé, and Mrs. Georges Getting.

"To this homage to the dead let me add my tribute to the living—to Professor T. Madsen, who presided with good humoured mastery over meetings of the Health Committee of the League of Nations; to Dr. Ludwik Rajchman, moving spirit of the Health Organization; to the ever youthful Nestor of Public Health in the United States, Professor Charles Edward Amory Winslow, whom we are happy to see among us; to Professor James M. Mackintosh, who makes social medicine an important element of the teaching at the London School of Hygiene; to Professor Henry E. Sigerist, the first volume of whose *History of Medicine* is the beginning of what will be an epoch-making work; to John A. Kingsbury, who guided the work of American foundations in matters

of social medicine to Frank G Boudreau Alan Gregg and John B Grant, who have succeeded him in that task

" I would also bear witness to how much social medicine owes to you my dear masters and friends Jacques Parisot and Andrija Stampar but the honour which you and other members of the Léon Bernard Foundation Committee including my friend and eminent colleague Maurice De Laet have done me confines me to expressing my admiration my gratitude and my esteem

" The Director General and his associates will realize that towards them too I cannot here express my innermost feelings Still others have inspired and helped me I hope that they will forgive me if I cannot mention them all by name and that they will know how much esteem and gratitude I have for them

Madam President the Léon Bernard Prize is awarded not so much to an individual as to a cause—that of social medicine which far from being a dogma far from advocating certain methods of care to the exclusion of others is a science free from all rigid systematization the science of the health of man in relation to his environment or what the University of Cambridge has called human ecology This would be a happy term if it did not omit the word medicine which I should like to keep until the day when we speak as Sir George Newman suggested not of the faculty of medicine but of the school of health

" Half a century ago social medicine child of the needs and spirit of the times took its first steps In 1946 its essential principles were given their highest expression in the declaration of the right to health which appears in the Preamble to the Constitution of the World Health Organization and in the Organization's activities which are becoming still more markedly social in character since the Organization has linked its efforts with those of the committee dealing with technical assistance to underdeveloped countries Can there be any more eloquent proof that health depends upon living conditions and upon national and international economy ?

" But while all governments have accepted the principle of social medicine so far it has not taken its due place either in teaching or in research or in practice The clinic and the laboratory continue to monopolize the attention of students and medical or surgical therapeutics that of the practitioner Neither students nor practitioners fully realize that as Hippocrates already said long ago in medicine the function of protecting and developing health must rank even above that of restoring it when it is impaired

" If the nobility of medicine resides in the selflessness of the physician the hygienist and their assistants its greatness resides in the scope of the services which they render and from this point of view the medicine which preserves health has a considerably greater influence for good than the medicine which restores health

Madam President I was privileged to be present at the inception of the World Health Organization From year to year the wisdom and zeal of those who direct it are extending its influence throughout the world You are about to discuss means of making its action still more effective Permit a very humble pioneer to tell you that overwhelmed by the honour that you have accorded him he feels even happier at the prospect of the victories which you are preparing for the good of humanity

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## PROGRESS IN WORLD HEALTH ORGANIZATION

Closing Address by the President of the Fourth Health Assembly

LEONARD A SCHEELE, M D

*Leonard A Scheele President of the Fourth World Health Assembly was born 25 July 1907 at Fort Wayne Indiana USA. He was educated at the University of Michigan (A B 1931) and at Wayne University (B.S. in Medicine 1933 M.D. 1934). He served his internship at the US Marine Hospital in Chicago Ill.*

*Dr. Scheele joined the US Public Health Service in 1934. In 1934-35 he was Assistant Quarantine Officer at the Port of San Francisco. Later he held the same post at the Port of Honolulu.*

*In 1937 Dr. Scheele began to devote himself to the study of cancer. He was a Special Cancer Fellow at Memorial Hospital New York City for two years following which he became officer in charge of the National Cancer Control Program of the National Cancer Institute Washington D.C.*

*During the second World War Dr. Scheele served as Chief Field Casualty Section Medical Division US Office of Civilian Defense Washington D.C. and in the US Army.*

*In 1946 he again joined the National Cancer Institute as Assistant Chief. He became Associate Director of the Institute in 1947 and concomitantly was appointed Assistant Surgeon-General of the US Public Health Service. Since April 1948 he has held the post of Surgeon General of the US Public Health Service. He was Chief Delegate of the USA at the Second and Third World Health Assemblies as well as at the Fourth.*

The Fourth World Health Assembly will soon close but first I would like to reminisce a bit and repeat a story you all know. For nearly a century we have made efforts to control the spread of communicable disease across national borders by international agreement, co operation and action. Many of these efforts were fragmentary and they left much to be desired. Too often very few nations participated but we should be proud of every one of these efforts and organizations because each one represented a milestone in our long range efforts to visualize public health as something transcending national boundaries. We were youthful and inadequate in our earliest efforts in the field of world health. But by 1945 the nations of the world were mature enough to discuss concepts of new and expanded action in international health. The latest and greatest of man's efforts in the international health field began in San Francisco in the United States of America in that year when the United Nations was founded. There representatives of several nations suggested that a special conference be convened to consider the truly international problems of health. During the following year a draft constitution was drawn up for a world health organization. Late in that year the draft was approved.

by an international health conference called by the Economic and Social Council of the United Nations and it became the basis for initial world health action on an expanded scale

As it emerged from the discussions of the International Health Conference the Constitution of the World Health Organization may well be considered by future historians as one of the most daring of all international agreements. It includes several concepts of very unusual character. Above all it defines health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Thus the traditional frontiers of health were pushed forward and the close relationship between international health problems and economic and social conditions was fully recognized.

Rapidly then the World Health Organization took form. The Interim Commission was formed to carry on until enough nations ratified the Constitution and made WHO a real living entity in the health field. By the summer of 1948 we had established an operating World Health Organization.

I repeat this bit of old history because I believe it will serve to emphasize to every one of us who has seen the progress made up to the end of this Assembly how truly we have witnessed a modern miracle of progress. Sometimes one or another of us has decried the slow development of the programme and probably he was partially correct. But as one soberly looks at the progress the last three years have brought in concrete programmes, he must be impressed and proud of what has been accomplished, all the more proud because it has been in the field of international humanitarian progress.

Today the WHO infant has become a full fledged adult. Each World Health Assembly and each year of life have added to WHO's stature. Our activities are broad. Some of them are taken almost for granted and yet they represent very vital functions. I have in mind such outstanding activities as the standardization of biological products and the work of the expert committee which has adopted new international standards.



FIG 14 President of the Fourth World Health Assembly D. L. A. Scheele

## PROGRESS IN WORLD HEALTH ORGANIZATION

Closing Address by the President of the Fourth Health Assembly

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*Dr Scheele joined the US Public Health Service in 1934. In 1934-35 he was Assistant Quarantine Officer at the Port of San Francisco, later he held the same post at the Port of Honolulu.*

*In 1937 Dr Scheele began to devote himself to the study of cancer. He was a Special Cancer Fellow at Memorial Hospital New York City for two years, following which he became officer in charge of the National Cancer Control Program of the National Cancer Institute Washington D C.*

*During the second World War Dr Scheele served as Chief Field Casualty Section Medical Division US Office of Civilian Defense Washington D C and in the US Army.*

*In 1946 he again joined the National Cancer Institute as Assistant Chief. He became Associate Director of the Institute in 1947 and concomitantly was appointed Assistant Surgeon General of the US Public Health Service. Since April 1948 he has held the post of Surgeon General of the US Public Health Service. He was Chief Delegate of the USA at the Second and Third World Health Assemblies as well as at the Fourth.*

The Fourth World Health Assembly will soon close but first I would like to reminisce a bit and repeat a story you all know. For nearly a century we have made efforts to control the spread of communicable disease across national borders by international agreement co operation and action. Many of these efforts were fragmentary and they left much to be desired. Too often very few nations participated but we should be proud of every one of these efforts and organizations because each one represented a milestone in our long range efforts to visualize public health as something transcending national boundaries. We were youthful and inadequate in our earliest efforts in the field of world health. But by 1945 the nations of the world were mature enough to discuss concepts of new and expanded action in international health. The latest and greatest of man's efforts in the international health field began in San Francisco in the United States of America in that year when the United Nations was founded. There representatives of several nations suggested that a special conference be convened to consider the truly international problems of health. During the following year a draft constitution was drawn up for a world health organization. Late in that year the draft was approved.

The Fourth World Health Assembly has not been a meeting characterized largely by stirring speeches and by lost motions. On the contrary it devoted itself sternly to the task which was put before it and performed its duty with a minimum of flourishes. Everyone knew that this task was to draw up blueprints for definite and immediate action which would bring greater help and happiness to this embattled earth—plans that through community of effort would bring nations closer together. This we accomplished because it was not a fortuitous meeting of men come together solely to protect their national interests but because in part it was a reunion of many delegations which in past Health Assemblies had learned to work together for a common purpose. Those who came for the first time immediately joined in that effort as mutual contributors to the success of the Assembly. Perhaps an outsider listening in to our debates would not be able to see the wood for the trees but now on this last day of the Assembly the woods stand out clearly in the picture. They are lofty mountain forests of progress.

Let us quickly review some of the accomplishments of this Assembly. One new Member Japan has been added to our roll. Spain and Germany will be full fledged members as soon as they deposit the proper instruments with the United Nations. I am informed that the Spanish document has now arrived in Geneva. The United Nations has been informed this morning by cable and the document will be on its way before the afternoon is over. Thus we come a step closer to having as members one hundred per cent of the nations of the world. We are not happy over the fact that some nations are inactive but the door remains open for their participation in the future.

Additional groundwork has been put in to speed up the provision of help to governments under the technical assistance programme. There can now be a rapid stepping up of action on the 108 requests now on hand from 40 governments and on the 38 additional projects with health implications now before other official international agencies. Ready funds are available for these programmes.

The Assembly has dealt with the problems of co-ordination of assistance from the various sources. Its recommendation for the establishment of national committees of co-ordination is of great practical importance. As every effort is made to co-ordinate multilateral and bilateral plans at the top level of the distributing agencies we shall have an assurance of co-ordination at the receiving end and the wishes and knowledge of local needs of the national health administrations will be given the fullest weight.

The streamlining of the agenda of the Committee on Programme proved successful in regard to deliberations concerning the regular activities of the Organization. Time was saved by not discussing the programme disease by disease but by broad topics and there was clear evidence of the growth

for penicillin and vitamin E and has formulated recommendations on a wide variety of essential therapeutic, prophylactic, and diagnostic agents both of animal and plant origin including diphtheria and tetanus toxoids, cholera vaccines, tuberculin BCG and streptomycin. The part of WHO in the development of an international pharmacopoeia with uniform rules of nomenclature and dosage for chemical drugs is a major accomplishment. The work of the Expert Committee on Drugs Liable to Produce Addiction and WHO's work with other international agencies concerned with problems of narcotics should serve as major wedges against the increasing exploitation of large numbers of men, women and children through encouragement of drug habits a problem currently growing in great proportions in many countries of the world as a result of the increased illicit export of narcotic drugs from several countries. The sixth decennial revision of the international lists of diseases, injuries and causes of death will bring us closer to comparative national vital statistics than we have ever been before. The epidemiological intelligence service is gradually growing as countries improve their individual reporting programmes.

The journals and publications of WHO are assuming new importance. Training programmes seminars congresses and other meetings on a variety of subjects plus the activities of the expert committees have been major factors in increasing the exchange of information and scientific knowledge and research and practical applications of research. Programmes to expand knowledge and the production of antibiotics and insecticides have made some progress and the stimulation of the use of these products has borne remarkable fruit in communicable disease control.

In the area of organization many of the early plans and hopes have been realized in the three years since the First World Health Assembly. Most countries are now in regional organizations. The Geneva Headquarters is excellently staffed in both programme and management fields.

This Assembly has been one of the smoothest running of the three. I have had the privilege and pleasure of attending. More credit for this than one can express adequately is due to the Secretariat. Much credit is due to the original planners and much is due to the Member Governments of WHO for their serious participation in WHO's affairs and for selecting outstandingly capable and interested health officials to serve on the Executive Board and to represent them as delegates to the Assemblies.

It is normal for some progress to be made with time and greater experience, but our progress might have been slower. Ordinarily large scale international co-operation is difficult to achieve but we have demonstrated that it can be done on a large scale and on a friendly basis. We have been helped too by the surveys of health needs in countries and by the guidance given the Health Assembly by the Regional Directors through the Director General in matters of programme requirements.

downs within the approved budget were arrived at easily showing how smoothly our organization and co operation are working WHO has increased its ability to work with the United Nations and other specialized agencies in areas of common interest One challenge we face in the future as international health activities expand is the need for quick exchange of programme information to the end that multilateral and bilateral programmes will complement each other and not compete It will require generous co operation without jealousy by all concerned

WHO has done some other things of an unprecedented kind at this Assembly Since its inception WHO has attempted to emphasize the basic concept of its responsibility for promoting the professional quality and standards of public health work To this end the Fourth World Health Assembly has witnessed the establishment of a series of technical meetings as a supplement to the discussions on quarantine programme budget administration and legal matters After considerable thought the Executive Board selected as a topic for these technical discussions the subject of training and education for public health work Discussion groups were organized one dealing with medical education a second with professional training in public health and a third with the training of sub professional personnel The sessions were well attended and evoked lively interest and good participation In fact on one occasion there was a complaint because a committee meeting was held simultaneously and some members could not attend both We agreed that there would not be overlaps in future years

I believe that I express the sentiment of the Assembly that the experiment has been a success and that such discussion should be an integral part of future Health Assemblies There seems to be a very common feeling that in planning for future Assemblies the topics for discussion should be even more specific and circumscribed than were those of this year in order to focus attention on a somewhat smaller and sharper objective Many topics have been suggested to the Executive Board as suitable for the coming year and valuable suggestions have been made as to details of operation of the discussions I sincerely hope that we may look forward to such discussions as a most worthwhile and essential part of future Health Assemblies

Another valuable facet of professional education is the programme for fellowships and health institutes There seems to be general agreement that the fellowship programme is one of the most fruitful contributions of WHO and that it can constitute an invaluable aid to the promotion of public health in all countries The full value of such programmes will be apparent in years to come as those who have benefited from such fellowships assume public health leadership in their respective countries and provide for the education and training of their fellow-countrymen There will however always be a need for such fellowships if we are to maintain



of a sympathetic understanding of world needs in the various fields of public health. A general work programme looking forward over the developing action of WHO on a long range basis was outlined.

An important reduction in percentage assessment was made in the case of one country—namely, the fixing of the United States percentage at one third of the total. I am sure the United States Government deeply appreciates that. No programme that depends too largely on one country can continue indefinitely to hold the full, active, and interested co-operation of all countries. A few temporary unit payment adjustments were made to meet certain emergency financial problems in certain countries.

It was agreed that a substantial increase in dollar assessments should be made in order that programmes might be added and expanded. In general the trends of the discussions of the last few years show that there is an overwhelming desire for more programme action by WHO. That should now be possible if governments can and will, make the higher contributions which were voted if they will shoulder the additional task of greater simultaneous self help to support WHO's demonstrations and will make direct contributions to special budgets for regional activities.

The increase in cost of programmes due to current world inflation serves as a challenge to every one of us concerned with WHO's programme, and with national health programmes, to make each dollar and each person on our staff work more efficiently. We have had some experience in this field in my country in the last few years. In spite of substantial cost increases without parallel appropriation increases we have increased our efficiency by elimination of weak units and programmes, by more efficient purchasing and by cheerful acceptance of harder work by everyone.

One would be remiss if one did not mention the excellent improvement in speed of payment of assessments to WHO with the result that, except for the inactive Members there are few in default on back payments. That is a tribute to the better understanding of WHO by nations to their great desire to participate actively in world health affairs and to the faith nations have in WHO and its Secretariat.

Increased interest has been shown in field programmes in environmental sanitation. This is probably the type of programme which has been least developed in most countries. I believe that the Fourth World Health Assembly has at long last recognized this more clearly and will continue to demand the kind of programme the Expert Committee on Environmental Sanitation has clearly recommended. The improvement of this programme is one way to make WHO's dollars stretch to save ten or twenty lives for the one that some programmes at equal or greater cost will save.

The Regional Office for the Western Pacific was established and Manila was chosen as the seat of this office. WHO recognized many acute problems as for example problems of refugee physicians. Continuation of the BCG study programme was voted. Decisions on final programme break-

Nine months are provided for delegations to send in possible reservations I am sure that everyone hopes there will be only a few such reservations The Fifth World Health Assembly will have the task of reviewing and dealing with these reservations and on 1 October 1952 the Regulations in final form will come into force with the effect of world law

These Regulations define the rights of millions of international travellers and protect the many more millions staying at home in countries which are receptive to one or more of the quarantinable diseases A balance has been struck between the need for more and more rapid travel and the necessity for excluding dangerous infection from aircraft ships and other means of locomotion

The Regulations are not static A most important new element is that they establish a means for constant review with a view to revision when sufficient experience has been gathered When world conditions change and when nations and WHO are successful in stamping out or minimizing the quarantinable diseases (many nations have been so successful in recent years) the Regulations can be relaxed and we can approach our real goal—simple free and safe travel

We have met in this Assembly to share ideas and to help guide WHO in the years ahead We have truly established bonds which should last for ever and should bind our countries closely and permanently in our fight for health

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## *Points from Speeches*

Sir John Charles United Kingdom

The control of disease to enable world food supplies to be increased is clearly one of the biggest problems before the World Health Organization today—with very great potentialities in the light of modern control methods particularly in respect of malaria We must all have been struck with the recent report by the World Health Organization antimalaria teams working in the South East Asia Region One of these teams working in the Eastern Bengal area of Pakistan reports that as the result of only one season's antimalaria work there was a 15% increase in rice crop yields

Dr P Gregorić Yugoslavia

The existence of the World Health Organization has made it possible for the health service representatives of various countries to hold regular meetings every year At these meetings they state the experience acquired and results achieved in the work of public health protection In addition to the work of the World Health Assembly we wish to point out and commend as a particularly valuable form of work the activity of the expert committees During the five years of work of the World Health Organization a large number of consultative meetings of experts

the maximum degree of exchange of ideas and knowledge between nations Allied with this is the promotion of institutes at which representatives of many nations can gather to share their experiences and obtain new ideas worthy of incorporation into their respective programmes I trust that in the years to come we shall never lose sight of the value and potentialities of our educational programmes

We have made progress in nursing The Expert Committee on Nursing has set many guide lines for us, and this Assembly has moved to implement them The public health nurses who serve WHO including those on field teams have turned in a brilliant record of achievement They are now accepted as part of the public health team Increasingly, our supply of bedside and auxiliary personnel will increase to meet present deficiencies All of these things will occur as we improve and expand nursing education along the broad lines recognized by WHO

Another major accomplishment occurred in the field of international quarantine practice where we are moving gradually from archaic, and oft times arbitrary barriers to free movement between countries and are setting up modern practices in line with modern concepts of communicable disease and its control

We have approved new International Sanitary Regulations—one hundred and fifteen terse Articles with various annexes laying down the basis for what national health administrations shall may or must not do in handling international traffic, in order to prevent the spread of certain diseases For four weeks before this Assembly met delegates from nearly forty governments worked on the draft prepared by the WHO Expert Committee on International Epidemiology and Quarantine They brought to a culmination the work of many people over a period of three years With the convening of this Assembly they were joined by delegates from more countries, and further improvements were made Throughout there has been a friendly spirit of give and take, with a full understanding of mutual needs In almost every case the final decisions were taken with overwhelming majorities often with unanimity always without bitter feelings on the part of those not in complete agreement Everyone appeared willing to sacrifice a little when necessary to help a neighbour A fine example of such comprehension was given us by the delegation of Saudi Arabia and the delegations of other countries directly concerned in the Mecca Pilgrimage A forward looking solution acceptable to all was found to this problem which yearly involves the journey of over 200,000 persons and presents grave epidemiological risks for them and for a great many more who might subsequently be exposed to infection

A short time ago the Assembly adopted the new Regulations thus taking the greatest step forward ever recorded in this oldest field of international public health For the first time in history there is a basis for a single code binding for all Members of the World Health Organization

world family of ours there are health problems that cannot be solved by any one individual member just as individuals in any one nation cannot solve as such their public health problems again for technical financial and administrative reasons WHO for all these reasons is especially called upon to assume and not to forsake its indispensable role in meeting the public health problems of the world as a whole

**Dr T Triantafyllou, Greece**

I would like to mention just two examples of progress achieved in my country with international assistance We have practically disposed of the ancient scourge of malaria by DDT It was done with the assistance of such agencies as the Rockefeller Foundation's International Health Division UNRRA ECA and the World Health Organization We may be on our way to dealing with the tuberculosis problem We were helped in it—in its aspects of preventive vaccination (BCG) early diagnosis and clinical care—by UNRRA the World Health Organization the International Tuberculosis Campaign and especially by UNICEF and ECA It is reasonable to assume that it would have taken much longer to arrive at this stage of programme development without international assistance

Every country has of course particular problems and special local conditions the study and facing of which need a special approach The solution of these problems is however made easier by drawing through the World Health Organization on the aggregate worldwide experience and knowledge it is also made easier through the prestige that is carried by recommendations and assistance provided by international bodies such as the World Health Organization

**Mr V Nalliah Ceylon**

I wish also to draw the attention of the members to the speech made on the last occasion by the Secretary-General of the United Nations He had pointed out to you that the challenge of the second half of this

present century—of the next twenty years—is the challenge of the 1 600 million peoples of the Asian countries Unless and until speedy steps are taken to improve the living conditions of the people of those areas there will be no peace whatsoever in this world no matter what the defence expenditure of any country is Now when we consider facts the Director General of WHO is today finding it difficult to collect together a paltry eight million dollars for an organization of this nature We are also reminded that there are nations which are prepared to spend 60 billion dollars on defence I say that the surest way to bring peace into this world is to encourage activities of organizations of this nature and I therefore trust that America which is today blessed with vast resources with leadership and with technical skill will undertake to bring about a reformation—a revolution—in the world by taking the leadership not in war but in fighting disease

**Dr R G Padua, Philippines**

In my country with a population of about 20 000 000 the average annual incidence of malaria is estimated in round figures at 2 000 000 and of tuberculosis at 1 300 000 The average number of deaths annually from malaria is 10 000 and those from tuberculosis 35 000 If we evaluate the economic loss from the death of a labourer at a minimum of \$2 000 and his earnings per day at \$1 50 we find that the country is losing from malaria and tuberculosis a man potential per year equivalent to a total value of \$660 000 000 To a small country like the Philippines such a figure is certainly staggering It does not include the cost of treatment and hospitalization that may be incurred since indigenous persons are entitled to free medical and hospital services during the time they are sick If that expense is included the total sum would be astronomical

**Dr L A Scheele United States of America**

WHO's influence for better health is felt even where no World Health Organ



world family of ours there are health problems that cannot be solved by any one individual member just as individuals in any one nation cannot solve as such their public health problems again for technical financial and administrative reasons WHO for all these reasons is especially called upon to assume and not to forsake its indispensable role in meeting the public health problems of the world as a whole

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**Dr L A Scheele United States of America**

WHO's influence for better health is felt even where no World Health Organi

zation team has ever come. I can give you a concrete example. The World Health Organization is one of the principal powers of malaria control through DDT residual spraying. Today, although one and one-half million people are being protected against malaria through this means of international action, the total number of persons now protected against malaria by DDT residual spraying is over fifty million. Thus, the direct action of WHO through international administration has inspired similar action by individual countries 33 times greater than WHO's activity itself. There can be little doubt that this is only a beginning. Through the work of this Assembly, the expert committees, and the central and regional secretariats of the World Health Organization, and their limited field work, a positive health chain reaction is set off which is so irresistible that it changes health conditions for the better in most parts of the world which are in need of such change.

WHO's real mission is to help others to help themselves on a firm and lasting basis. It must never take them a stereotyped programme. For that reason we must allow the Director-General and his staff great latitude in developing programmes within the broad policies we set forth. Our almost too careful scrutiny of every little programme item, valuable and necessary as it was earlier, should now, in my opinion, give way to action only on the broadest of programme programmes.

I would like to cite one example of how a country found it possible to secure WHO's support. Recently the Executive Board provided a \$55,000 emergency grant to Turkey to help it to meet emergency health problems caused by the sudden influx of large numbers of refugees. However, after the grant was given, Turkey found it possible to share part of the cost of refugee health and returned \$5,000 of the money to WHO. To me this is an example of how sincerely countries in the World Health Organization help themselves when they can, and how little justification there is for the comment that one occasionally hears, to the effect that countries look

solely for a "hand-out" without regard for others in the Organization.

#### The Hon. Rajkumari Amrit Kaur, India

I venture to say, speaking for my country and my zone, that it is the practical work carried on in our region from the very beginning that has found for WHO a warm place in the hearts of our people. Time and again, when our Government is unable to undertake a health programme because of financial stringency, the representatives of the people almost instinctively ask whether WHO cannot step in on the breach.

#### Dr. Phan Huy Dan, Viet Nam

Viet Nam is beginning to receive its share of WHO assistance. For several years to come this assistance will outweigh our contribution. Our people are grateful to the World Health Organization and all its Members, but, far from wishing to see this state of affairs continue, we earnestly look forward to the day when we shall be able to ask much less and contribute far more. We hope that peace, for which all the people of Viet Nam are longing, and which is the essential condition for any improvement in public health, will soon be restored. I am sure that all the delegations here present, whatever the political attitude of their governments toward Viet Nam, will share this hope.

Take the highest budget figure for the World Health Organization—that of \$870,251 proposed by the Director-General for the financial year 1952, which has given rise to long and painful discussions—give it to a single country, it will still be insufficient for its health programme. The share of this highest budget figure reserved for India amounts to \$159,887 which for a population of 340,000,000 means one dollar among more than 2,000 inhabitants. If sums from the International Children's Emergency Fund and the Technical Assistance Board are added, the total figure for India becomes \$1,498,425 or one dollar among more than

250 inhabitants hardly enough to buy one quinine tablet per person per year

The importance of the World Health Organization lies rather in its contribution of technical experts—steadfast men of vision active and devoted knowing how to set aside political considerations and national frontiers in order to work for the health of all peoples keeping abreast of the most recent technical developments the latest and most effective methods of curative and preventive medicine assembling them listing them and making them available to national health organizations both governmental and non governmental encouraging and advising these organizations co-ordinating the health plans of all countries harmonizing them and bringing them together to form a world health plan bringing home to all peoples the existence of a common enemy—the existence from the earliest times of a world struggle against disease and suffering persuading them of the need to unite in the battle for health—this work of obtaining listing harmonizing and co-ordinating information is on its own an immense and difficult task which calls for a numerous and competent staff We therefore find it logical that a large proportion of the budget of the World Health Organization should go for staff In our opinion the budget of the World Health Organization is wisely distributed Although we appreciate the constructive spirit which prompted the criticism of the Yugoslav Delegation we do not think that criticism fully justified

Dr N Karabuda Turkey

You all know that during its last session the Executive Board voted a sum totalling \$55 000 for assistance in the form of emergency medical supplies to Turkish refugees from Bulgaria In so doing the Board recognized how serious and pressing was the situation then prevailing in Turkey

The Bulgarian Government had informed my Government of its intention to expel within a relatively short time a part of the Turkish ethnic minority living in

Bulgarian territory a group of about 800 000 persons composed largely of old people and children

In the beginning the situation was one of extreme gravity because the Turkish Government was taken quite unawares and was suddenly faced with the many difficulties caused by the stream of immigrants who were arriving by the hundreds every day in the midst of a particularly severe winter

Here in your presence I would once again express my country's deep gratitude to the World Health Organization and to the Executive Board which showed a perfect understanding of the situation

Dr D Bordé France

France welcomes with great satisfaction the adoption by the Fourth World Health Assembly of the Draft WHO Regulations No 2 This adoption marks the end of prolonged efforts and of delicate technical and juridical discussions It is the outcome of the international sanitary conferences which have been held successively during a century and which themselves were the first signs of a desire for co-operation in the field of health

It is obvious that there could not be absolute unanimity with regard to regulations of this kind During one of our first plenary meetings Professor Jacques Parisot warned us that it would be wise to expect some reservations with regard to their adoption

But these reservations must not affect the validity and general effectiveness of the Regulations It is essential that all countries show an equal desire for loyal co-operation and mutual comprehension This is the primary condition to be fulfilled if the task we have today completed is to be crowned with success

The World Health Organization receives its prerogatives in this matter from the body which during more than 40 years was responsible for the administration and revision of international sanitary conventions—the Office International d'Hygiène Publique—and you will find it natural



that the French delegation desires here to pay a tribute to that body

Our gratitude is due to all those who from the inception of our Organization have participated in the drawing up of the Regulations which are submitted to us today members of the Expert Committee on International Epidemiology and Quarantine the joint Office International d'Hygiène Publique and World Health Organization working groups jurists

qualified members of the Secretariat and delegates to the Special Committee to consider the Draft International Sanitary Regulations which met in April In particular we would thank our friend Dr Morgan Chairman of the Special Committee on Sanitary Regulations ex Chairman of the Comité permanent de l'Office International d'Hygiène Publique who has now acquired a new claim to our admiration

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# DELEGATES AND OTHER PARTICIPANTS IN THE FOURTH HEALTH ASSEMBLY

## DELEGATIONS OF MEMBER STATES

### Afghanistan

#### *Delegates*

Dr A. Zahir (*Chief Delegate*)  
Dr A. K. Rassoul

### Argentina

#### *Delegate*

Mr J. L. Dominguez Drago

### Australia

#### *Delegates*

Dr A. J. Metcalfe (*Chief Delegate*)  
Dr D. A. Dowling  
Mr P. Shaw

#### *Adviser*

Mr L. H. Border

### Austria

#### *Delegates*

Dr A. Khaum (*Chief Delegate*)  
Mr K. Strobl

### Belgium

#### *Delegates*

Professeur M. de Laet (*Chief Delegate*)  
Dr P. J. J. van de Calbeyde  
M. L. A. D. Geeraerts

#### *Alternate*

Dr A. N. Duren

#### *Advisers*

Professeur A. H. J. Rodham  
M. F. A. E. Bosmans  
Baron F. de Kerchove d'Exaerde

### Bolivia

#### *Delegate*

Dr F. Veintemillas

### Brazil

#### *Delegates*

Dr A. Mendonça (*Chief Delegate*)  
Professor M. J. Ferreira

### Brazil (*contd*)

#### *Advisers*

Mr B. Rocque da Motta  
Mr J. Barreiros  
Mr O. de Souza Bandeira  
Mr C. A. de Souza e Silva

### Burma

#### *Delegates*

Mrs Daw Khin Kyi Aung San  
(*Chief Delegate*)  
Dr Maung Gah  
Dr Ba Maung

### Cambodia

#### *Delegates*

Dr Neal Smuock (*Chief Delegate*)  
Dr Chan-ok

### Canada

#### *Delegates*

Dr E. A. McCusker (*Chief Delegate*)  
Dr P. Gauthier  
Dr F. D. Mott

#### *Advisers*

Dr B. Bundock  
Mr N. F. H. Buris  
Miss E. P. MacCallum

### Ceylon

#### *Delegates*

Mr V. Nalliah (*Chief Delegate*)  
Mr A. J. Joseph  
Dr C. T. Williams

#### *Adviser*

Dr W. A. Karunaratne

### Chile

#### *Delegates*

Dr N. Romero y Ortega  
(*Chief Delegate*)  
Dr A. L. Bravo

**Costa Rica**

*Delegate*

Dr O Vargas Méndez

**Cuba**

*Delegate*

Dr F Hurtado

**Denmark**

*Delegates*

Dr J Frandsen (*Chief Delegate*)

Dr J Holm (*Deputy Chief Delegate*)

Dr O Andersen

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**Dominican Republic**

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Mr J B Pynado

**Ecuador**

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**Egypt**

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Dr M A Nasr Bey  
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Professor A W Mooro Pasha

Dr M S El Far Bey

Dr A El Halawani

Dr A F Tobgy Bey

Mr Z Hashem

**Ethiopia**

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**Finland**

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Dr S S Savonen (*Chief Delegate*)

Mr V V Rantasalo

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Dr G L F Muraz

M J Foessel

M M Vaidic

Mlle A Lissac

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Mr R S Mark

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*Delegate*

Dr G Burke

**Haiti**

*Delegate*

Dr F Sam

**Iceland**

*Delegate*

Dr J Sigurjónsson

**India**

*Delegates*

The Hon Rajkumari Amrit Kaur  
(*Chief Delegate*)

Sir Arcot Mudaliar

Dr K C K E Raja

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*Alternate*

Dr C V Ramchandani

*Adviser*

Sir Dhiren Mitra

**Indonesia**

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# RECENT AND FORTHCOMING MEETINGS

1951

8 30 January	WHO Executive Board Standing Committee on Administration and Finance Geneva
22 January	WHO Executive Board seventh session Geneva
5 February	
30 January	Léon Bernard Foundation Committee Geneva
9 April-4 May	WHO Special Committee to consider the Draft International Sanitary Regulations prepared by the Expert Committee on International Epidemiology and Quarantine Geneva
10 17 April	Joint FAO/WHO Expert Committee on Nutrition second session Rome
19 28 April	WHO Expert Committee on the International Pharmacopoeia eighth session Geneva
30 April 1 May	WHO Expert Committee on the International Pharmacopoeia Subcommittee on Non Proprietary Names second session Geneva
7 25 May	Fourth World Health Assembly Geneva
18 May	WHO Regional Committee for the Western Pacific first session Geneva
28 29 May	WHO Consultative Committee for Europe first session Geneva
1 18 June	WHO Executive Board eighth session Geneva
30 July-4 August	WHO Expert Committee on Insecticides third session Savannah Ga
3 5 September	WHO Consultative Committee for Europe second session Geneva
18 21 September	WHO Regional Committee for the Western Pacific second session Manila
20 25 September	WHO Regional Committee for South East Asia fourth session Rangoon
24 27 September	WHO Regional Committee for Africa first session Geneva
15 20 October	WHO Expert Committee on Environmental Sanitation second session Geneva
15 20 October	WHO Expert Committee on Mental Health Alcoholism Subcommittee second session Copenhagen
15 20 October	WHO Expert Committee on Nursing second session Geneva
22 October	European Seminar on Alcoholism Copenhagen
4 November	
29 October	WHO Expert Committee on the International Pharmacopoeia ninth session Geneva
3 November	
November tentatively	WHO Expert Committee on Cholera first session New Delhi
5 November	WHO Expert Committee on the International Pharmacopoeia Subcommittee on Non Proprietary Names third session Geneva
5 10 November tentatively	WHO Expert Committee on Maternity Care first session Geneva
12 17 November	Second Seminar for European Sanitary Engineers Rome
19 23 November	WHO Expert Committee on Drugs Liable to Produce Addiction third session Geneva
26 30 November	WHO Expert Committee on Trachoma first session Alexandria
December	WHO Expert Committee on Biological Standardization fifth session Geneva

## NEW INTERNATIONAL SANITARY REGULATIONS

The adoption of the new International Sanitary Regulations (WHO Regulations No. 2) intended to replace all existing sanitary conventions may be considered the major achievement of the World Health Organization to date. Despite the divergent interests involved, the difficulties caused by extreme differences in local health conditions throughout the world, the continually changing situations arising from the increasing rapidity of international communications and finally the steady progress in our knowledge of the etiology and prevention of infectious diseases—all elements which make it difficult to crystallize international sanitary regulations at any given moment—the Regulations were unanimously adopted by the Fourth World Health Assembly. This unanimous acceptance is due largely to the satisfactory co-ordination which the World Health Organization was able to effect in the work of various committees of world renowned experts and of several eminent jurists. The drawing up of the new sanitary regulations was also facilitated by experience acquired in the application of previous sanitary conventions and by the views expressed by governments which had studied the draft regulations.

An evident desire to prevent by the application of sanitary conventions the introduction and spread of pestilential diseases—a desire which has aroused the interest of health administrations throughout the world for a long time, especially during the last 100 years—was at first doomed to failure because of lack of scientific bases. For example, the question of whether or not cholera was spread by water and foodstuffs was once settled by simple vote. Later, although increased knowledge of bacteriology gave sanitary conventions more solid bases, the slowness with which such conventions were ratified greatly diminished their value. Thus it took years for the 1912 and 1926 Conventions to be ratified by certain countries. While many countries adopted new conventions, others were still applying the former ones. The establishment of WHO makes possible an end to this chaos once and for all. In fact, Article 22 of its Constitution provides that regulations adopted by the World Health Assembly shall enter into force after simple notification for all Member States, with the exception of those who, within a specified period, have made known either their reservations or their refusal.

For the present Regulations a procedure has been provided whereby in a similar manner they may be modified, if necessary, so as not to contain out of date clauses. In addition, if their application presents certain difficulties, it will be possible to introduce new provisions.

## History of the New International Sanitary Regulations

One of the first concerns of the WHO Interim Commission was to create, in 1947 expert committees to study the problems of epidemiology and quarantine and in particular, the revision of the sanitary conventions. The meeting in Alexandria of a group of experts who were to examine the question of sanitary control of the Meccan Pilgrimage<sup>1</sup> and the convening of an expert committee on quarantine in October 1947, at the time of the cholera epidemic in Egypt,<sup>2</sup> were among the first achievements along this line. The Interim Commission also set up an expert committee on international epidemic control to prepare a redraft of international sanitary legislation<sup>3</sup>. In addition, the Commission was, from the very beginning concerned with the best means for ensuring regular and rapid dissemination of epidemiological information on pestilential diseases<sup>4</sup>.

In 1948 the First World Health Assembly decided that the committees on quarantine and epidemiology should be merged into a single body called the Expert Committee on International Epidemiology and Quarantine,<sup>5</sup> which was to examine the existing sanitary conventions and combine them into a single set of regulations which would meet modern needs. From that time on, this expert committee met on various occasions<sup>6</sup> and kept in constant contact with other expert committees responsible for studying the progress made in knowledge concerning each of the quarantinable diseases<sup>7</sup> plague cholera, yellow fever, smallpox, typhus, and relapsing fever—the last becoming the object of quarantine measures for the first time. On the basis of all this work draft sanitary regulations were drawn up. After having been submitted to WHO Member States for their observations these regulations were examined in detail by a special committee the establishment of which was decided upon by the Third World Health Assembly<sup>8</sup>.

### Work of the Special Committee

The Special Committee to consider the Draft International Sanitary Regulations first met in Geneva on 9 April 1951 its meetings numbering 40 in all continued until 21 May. This committee under the chairmanship of Dr M. T. Morgan former President of the Office International d'Hygiène Publique brought together delegates from most of the Member States of

<sup>1</sup> *Chron. World Hlth Org.* 1947 1 85.

<sup>2</sup> *Chron. World Hlth Org.* 1947 1 146.

<sup>3</sup> *Chron. World Hlth Org.* 1947 1 17.

<sup>4</sup> *Chron. World Hlth Org.* 1948 2 36.

<sup>5</sup> *Chron. World Hlth Org.* 1948 2 186.

<sup>6</sup> *Chron. World Hlth Org.* 1949 3 1, 1950 4 46, 1951 5 54.

<sup>7</sup> Since the meeting of the Special Committee this term has been applied to the diseases previously referred to as pestilential.

*Chron. World Hlth Org.* 1950 4 - 7.

WHO as well as representatives of the International Civil Aviation Organization the International Air Transport Association and the World Medical Association

Two trends were apparent during the meetings of the Special Committee. In the belief that the regulations should restrict international traffic as little as possible certain delegates were of the opinion that quarantine

FIG 1 INTERNATIONAL SANITARY REGULATIONS



Left to right: Mr M. T. Morgan, Chairman of the Special Committee; Mr N. M. B. Millant of the United Kingdom Ministry of Health; and Mr O. C. Haselgrove of the United Kingdom Ministry of Transport.

measures should be kept to a minimum. This concept was supported by the principle that excessive quarantine barriers are not effective against the introduction of diseases and that States must base the prevention and eradication of quarantinable diseases on adequate public health services. There was an opposing trend on the part of delegates from countries whose populations are particularly subject to yellow fever and cholera to want provisions against these diseases reinforced. It was possible to reconcile these viewpoints to a considerable extent. In any case as was stated by Dr Morgan the Regulations will be progressively amended with advances in science and the acquisition of experience.\*

Reports of subcommittees and working parties' notes presented by delegations regarding various questions relative to the Regulations and each article of the Regulations themselves were carefully examined during



the meetings of the Special Committee (A summary of the discussions which took place is given later) In addition to the final draft of the Regulations, ten draft resolutions concerning them were submitted to the Fourth World Health Assembly by the Special Committee

### **Analysis of the International Sanitary Regulations**

The Regulations as they were finally adopted, comprise ten parts The first three deal with definitions, notifications, epidemiological information, and sanitary organization The two following parts include general sanitary measures applicable to all the quarantinable diseases and provisions relative to each of them in particular The other parts deal with sanitary documents sanitary charges, and various provisions final and temporary, with regard to the application of the Regulations A series of appendices give models of various documents deratting and deratting exemption certificates international certificates for vaccination or revaccination, and the Maritime Declaration of Health Two special annexes relate to the sanitary control of the Mecca Pilgrimage and to the standards of hygiene and comfort with which pilgrim ships must comply

#### *Scope and limits of the Regulations*

The Regulations stipulate that the measures authorized constitute the maximum which a State may demand, with respect to international traffic, for the protection of its territory against epidemic diseases This provision allows no doubt as to the fact that any measure which goes beyond the limits prescribed would constitute in fact, a violation of the Regulations However clauses have been provided so that special measures may be applied in case of emergency, but these exceptions refer only to epidemic diseases classified as non quarantinable

### **Discussions Concerning the Quarantinable Diseases**

Among the quarantinable diseases yellow fever and cholera were particularly subject to long discussions In view of the progress made in the prevention of typhus and relapsing fever, certain delegations felt that these diseases were now relatively less important and even suggested that they be removed from the list of quarantinable diseases This proposal was rejected, however, since the absence in the Regulations of provisions dealing with these two diseases might lead to the introduction of excessive measures concerning them in certain national legislations

#### *Smallpox*

A very important decision was taken with respect to smallpox a vaccination certificate may be required of every person making an inter

national voyage even if he does not come from an area infected with smallpox. This decision is based on the principle that everyone should aid in the prevention of this disease and that it is not sufficient to take measures solely with regard to persons coming from infected areas and consequently solely with regard to such areas. non-vaccinated persons travelling to areas where smallpox is still prevalent may through their negligence encourage the outbreak of epidemics.

### *Yellow fever*

Article 74 of the Regulations provides that in a yellow fever receptive area the health authority may demand the isolation of a person making an international voyage and coming from an infected local area who is unable to produce a valid certification against yellow fever until his certificate becomes valid or until a period of six days has elapsed since the date of the last possible exposure to infection (whichever period is the shorter). This provision was discussed at length before it was adopted. For delegates of certain countries such as India—which seems particularly susceptible to yellow fever—the six day period appeared decidedly inadequate. Her representative envisaged the possibility that yellow fever might develop after vaccination without producing the usual symptoms and that its virus might circulate in the blood of the infected person for two or three days. There would thus be a danger that the infection might spread and cause a veritable catastrophe in India or in other Asian territories. The Indian delegate therefore wanted a greater margin of safety: a nine day period for example during which the traveller could be isolated and sheltered from mosquitos. However in the opinion of Dr. Soper, Director of the Pan American Sanitary Bureau—who has devoted some twenty years to yellow fever control—and of other delegates yellow fever never appears in an infected person after six days and the limitation of control measures to that period has never been responsible for an epidemic. The isolation period may therefore be fixed at six days.

The definition of yellow fever endemic zones also gave rise to prolonged discussion. Among the quarantinable diseases yellow fever occupies a special place: it is the only one in which endemicity is clearly delineated. In addition conditions in yellow fever endemic zones are among those covered in the definition of infected local areas: these zones are therefore subject to quarantine measures. According to the Regulations the definition of such zones may be based on the presence of *Aedes aegypti* or another domiciliary vector as well as on the persistence of the virus among wild animals. Because of vaccination campaigns and for other reasons yellow fever immunity in man as detected by the mouse protection test is found outside the limits of yellow fever endemic zones: consequently this criterion cannot be used for defining such zones. A draft resolution

requesting a study and definition of technical criteria for delineating yellow fever endemic zones was submitted to, and approved by the Fourth World Health Assembly

### *Cholera*

According to the draft Regulations, persons coming from a local area infected with cholera who were not provided with a valid vaccination certification were either to undergo vaccination or to be placed under surveillance<sup>10</sup> for a five day period, reckoned from the date of departure from the infected local area. The Egyptian delegation considered that vaccination alone was inadequate and that the vaccinated person should be placed under surveillance. This delegation thought that the development of immunity required at least seven days and that therefore the security given by vaccination could not be considered as absolute. It was decided to make provisions in the Regulations for the possibility of placing under surveillance for five days, persons coming from an infected local area even if they possessed a valid vaccination certificate, and of isolating those who did not possess one.

The question of the examination of stools or of rectal swabbing measures which used not to be taken in the case of persons coming from infected local areas unless they exhibited symptoms of cholera, was also studied. According to certain delegates, the value of these measures is slight since even a person recovering from cholera excretes virulent vibrios for only a short period rarely exceeding five days; thus examination of stools particularly during sea voyages lasting at least five days, would have little significance. In the opinion of other delegates however the period during which vibrios are excreted may be longer and the importance of germ carriers should not be underestimated. Persons with abortive or sub clinical symptoms of cholera may be especially dangerous, and such cases can be discovered only by bacteriological examination. It was decided therefore, that no one could be required to submit to rectal swabbing and that only passengers coming from an infected local area could be subjected to examination of stools during the incubation period of cholera and even then only if they showed symptoms suggestive of the disease.

### **Discussions Concerning General Provisions**

#### *Hygiene and sanitation of ports and airports*

The draft Regulations set forth the ideal sanitary conditions with which ports and airports should comply as regards possibilities for deratting, disinsectization, isolation of infected cases, medical service, etc. On the

<sup>10</sup> By surveillance is meant the obligation of the person concerned to remain in touch with the health authority and to follow the instructions of the latter concerning him.

proposal of the British delegation provisions concerning this part of the Regulations were considerably modified so as to lessen the rigidity of clauses referring to sanitation in ports and so as to make it possible to adapt the Regulations to conditions which actually exist in many ports and which are not apt to be improved in the near future

The representative of the International Air Transport Association stressed the importance of safeguarding the health of crews of aircraft and thereby assuring steady flow of air traffic. In this connexion there should be such a high standard of hygiene and sanitation at least on the principal air traffic routes as to avoid any holding up of traffic due to preventable diseases (dysentery food poisoning and gastro enteritis malaria etc)

The Fourth World Health Assembly decided to establish with the International Civil Aviation Organization a joint committee on the hygiene of airports which will draw up standards for sanitation as well as draft international conventions or WHO supplementary regulations on this subject

### *Application of the Regulations*

A proposal concerning the institution of an international sanitary council was submitted to the Special Committee. This council would be responsible for exercising general supervision over the operation of the Regulations and would regularly review their functioning submitting a report to the Health Assembly and recommending any changes deemed necessary. Another proposal suggested the establishment of a judicial body which would have to deal with disputes arising from the application of the Regulations. Certain delegates rejected the idea of a permanent body feeling that the Assembly could establish an appropriate committee which would meet from time to time as required. Experience has shown that almost all international disputes resulting from the application of the sanitary conventions can be smoothed out by the Director General only a very small proportion being submitted for settlement to the Expert Committee on International Epidemiology and Quarantine.

It was decided therefore to retain the mechanism employed thus far the Director General will have the task of settling disputes which may arise and if need be may call on an appropriate technical committee. The latter would be able if necessary to draw up supplementary regulations concerning diseases not covered by Regulations No. 2 and to present as required recommendations relative to practices and technical methods for aiding health administrations in the application of the Regulations. The committee would consist of a nucleus of epidemiologists and quarantine specialists to which would be added according to the questions on the agenda experts on the hygiene of ports and airports on international law

requesting a study and definition of technical criteria for delineating yellow fever endemic zones was submitted to and approved by, the Fourth World Health Assembly

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## Publication of the Regulations and the Reports of the Special Committee

The new International Sanitary Regulations have been published with an index in *World Health Organization Technical Report Series No 41*. The minutes of the meetings of the Special Committee, the Regulations themselves, the basic documents used by the Special Committee and the reports of the Subcommittee on the Mecca Pilgrimage and of the Legal Subcommittee will be published in *Official Records of the World Health Organization No 37*.

## ALCOHOLISM A PUBLIC-HEALTH PROBLEM

Recognition of alcoholism as a public health problem rather than as a social disorder subject to reform by legal and other non medical measures is steadily increasing. When the Health Committee of the League of Nations tried in 1928 to deal with alcoholism as part of a worldwide health problem its efforts were hampered by lack of sufficient understanding on the part of the general public of the medical and public health aspects of alcoholism. In the past ten or twelve years however noteworthy progress has been made in bringing alcoholism into the realm of scientific research and in treating it as a disease affecting the mental and physical health of a considerable portion of the adult population of many countries. This progress enabled the Subcommittee on Alcoholism of the WHO Expert Committee on Mental Health when it met in December 1950<sup>1</sup> to base its discussions on objective data and to recommend to WHO and to national health administrations practical measures for preventing and treating alcoholism. The report on this subcommittee's discussions and recommendations has recently been released by WHO and is available as No 42 in the *World Health Organization Technical Report Series*.

The following are members of the Subcommittee:

- Members:**
- D. S. B. T. H. U. N. o. P. y. c. h. i. c. Zagreb, Y. g. l.
  - Professe. L. E. D. bert P. fesse. r. g. é. g. é. l. Fac. lité. d. Méd. e. d. l'Un. vers. té. d. P. ris. F. an.
  - (Vl. -Chai man)
  - D. R. Fl. ming. Direct. Alcoh. I. Ch. F. t. r. B. t. Brigham. Hosp. tal. Best. M. USA. (R. p.
  - p. f.)
  - D. G. A. R. L. dq. i. A. lant. Prof. o. f. P. s. y. h. i. c. h. f. Phys. La. gb. Hosp. tal. Stock.
  - h. l. m. Swed. (Ch. i. m.)
  - P. fesse. M. M. H. P. fesse. de. P. s. y. h. i. Méd. m. Direct. d. l'Hôp. t. l. psych. triq. d.
  - Mû. g. Bern. Sw. zerland.
  - D. M. Schm. dt. Ch. ef. Psych. inst. Inst. t. se. f. Fort. Psych. i. y. Dep. rtme. t. of. P. l. ce. Copen. hag.
  - D. nm. k.
- Secretaries:**
- D. G. H. g. Ch. f. M. tal. H. lth. Secto. WHO. (S. r. f. y.)
  - Pr. f. E. M. J. l. l. u. k. WHO. Coun. It. t. Alcoh. I. m. Dean. Inst. t. f. Alcoh. I. St. dies. T. as.
  - Chr. t. U. r. y. F. r. t. W. sh. T. as. USA. (M. t. d. owing. t. l. l. o. c. e. s.)
  - D. P. O. W. l. f. Chu. f. Addict. n- produc. g. Drugs. Secto. n. WHO.

and on maritime or aviation questions. The committee would have to be able to ensure the co-operation and technical aid of other expert committees and competent study groups of WHO particularly those concerned with epidemic diseases, insecticides, and environmental sanitation.

### *Non quarantinable epidemic diseases*

Although the Regulations apply specifically to the quarantinable diseases it follows from the terms of some of the Articles that other epidemic diseases may also be subject to certain measures. Thus free pratique may be refused for justifiable reasons notably if the presence of other epidemic diseases on board an aircraft or ship is suspected. The committee felt that certain other epidemic diseases were of such importance that it would perhaps be necessary eventually to draw up new international regulations dealing with them. Several delegates were of the opinion that the invasion of their countries by diseases such as malaria was a danger quite as serious as that represented by the quarantinable diseases.

Among the questions which the Expert Committee on International Epidemiology and Quarantine will have to study are measures to be taken with respect to isolated communities in order to protect them against diseases—measles for example—which although commonplace elsewhere, may cause high morbidity and mortality among them.

### **Mecca Pilgrimage**

Five meetings were held under the chairmanship of Dr Morgan to discuss the sanitary measures relating to the Mecca Pilgrimage which constitute Annex A of the Regulations. Because of the special epidemiological problems which it raises the Pilgrimage is always subject to stricter provisions than those applied to ordinary international traffic. The special regulations will probably be abolished in the future and the Pilgrimage will then be subject to the same measures as ordinary traffic.

Since a certain number of pilgrims travel to the Hedjaz by air special provisions had to be drawn up with regard to aircraft. The standards with which ships and aircraft bearing pilgrims must comply have been assembled in Annex B of the Regulations.

Pilgrims are obliged to be vaccinated against cholera and smallpox, and a valid certificate of vaccination against yellow fever will also be required from those coming from a local area infected with yellow fever or from a yellow fever endemic zone.

Beginning with the 1952 Pilgrimage season the Kamaran Quarantine Station, which has thus far been responsible for inspecting pilgrim ships going to the Hedjaz by a route other than the Suez Canal, will be closed its functions will be taken over by the quarantine station now under construction at Jeddah. The Government of the United Kingdom will supervise the operation of the Kamaran Station during the 1951 Pilgrimage.

information is urgently needed however and the Subcommittee on Alcoholism discussed this aspect of the problem at considerable length. It outlined several steps for compiling national statistics on the incidence of alcoholism: (1) accurately assessing the mortality caused by cirrhosis of the liver and by acute or chronic alcoholism with complications; (2) devising means of assessing the extent of morbidity caused by alcoholism accompanied by psychoses, neurological disorders, etc.; and (3) ascertaining the numbers of addictive drinkers not yet showing irreversible organic damage. These last two steps are particularly difficult and depend to a great extent upon the provision of treatment facilities for alcoholism in its various stages, since such facilities provide a means of discovering and recording cases. It is obvious, for example, that there is a far better opportunity for obtaining reasonably accurate information on the incidence of the earlier stages of alcoholism in Sweden, where there is a widespread social organization for the rehabilitation of the alcoholic, than there would be in a country where treatment facilities are provided only for individuals in the advanced stages of the disorder.

The subcommittee recommended that WHO arrange for the very few experts who have studied the statistical problems of alcoholism to meet and prepare background information for its next session. It examined the formula developed at Yale University by Dr. E. M. Jellinek for predicting—on the basis of population mortality statistics and other data—the number of chronic alcoholics with complications likely to be found in the different states of the USA. In appendices to its report the subcommittee gives a summary of the principles of the Jellinek formula and estimates of the number of alcoholics with complications in different countries as determined by applying this formula.

### Treatment of Alcoholism

As noted previously, the prognosis and treatment of alcoholism differ according to the stage of development which the addiction has reached. In the first or symptomatic stage it may be possible to deal psychiatrically with the underlying cause of the drinking. If this is successfully accomplished, the patient can resume moderate controlled drinking such as may have been his practice before the alcoholic episode. Once the second or addictive stage is reached, however, it is impossible for the patient again to become a moderate drinker, and therapy must aim at complete abstinence.

#### *Facilities*

In well developed countries treatment facilities are usually available for advanced cases of alcoholism, especially for those which show permanent



## Definition of Terms

The subcommittee defined alcoholism as any form of drinking which in its extent goes beyond the traditional and customary 'dietary' use or the ordinary compliance with the social drinking customs of the whole community concerned irrespective of the etiological factors leading to such behaviour and irrespective also of the extent to which such etiological factors are dependent upon heredity, constitution, or acquired physiological and metabolic influences.

From a clinical point of view there are three recognizable stages in the development of alcoholism each with a different significance with regard to prognosis and treatment. In the first stage termed symptomatic drinking, alcohol is taken as an anodyne for a current physical psychological or social problem. This use of alcohol may create further difficulties which lead in their turn, to further excessive drinking. The condition of true alcoholism thereby is established and the drinking passes into the second, or 'addictive', stage.\* The third stage is reached when organic disease or psychic deterioration appears.

Other relevant terms discussed by the Subcommittee on Alcoholism included

1 tolerance which was described as the level of the threshold dose of alcohol for a given individual beyond which impairment of functional efficiency occurs

2 cured a term not to be used since once an individual has reached the addictive stage in drinking he can never expect to become again a moderate drinker—which makes 'cure', in the strict sense of the word impossible. The subcommittee suggested that in assessing the efficacy of treatment reference should be made to the percentage of cases successfully arrested rather than cured. It emphasized that cases of addictive alcoholism should be considered successfully arrested only if abstinence has continued for at least two or more years.

## Need for Statistical Information

The extreme variations in the social drinking customs and habits in different countries, the types of beverages consumed and the average level of consumption in different populations—all these factors make statistical evaluation of the incidence of alcoholism very difficult. Such statistical

\* The Subcommittee on Alcoholism noted with interest in this connection the definition of drug addiction adopted by the Expert Committee on Drugs Liable to Produce Addiction. Drug addiction is a state of periodic or chronic intoxication detrimental to the individual and to society produced by the repeated consumption of a drug (natural or synthetic). Its characteristics include (1) an overpowering desire or need (compulsion) to continue taking the drug and to obtain it by any means (2) a tendency to increase the dose (3) a psychic (psychologic) and sometimes a physical dependence on the effects of the drug. (World Health Organization Report Series 1950 21:6 see also *Chron World Health Organ* 1950 4:76)

tisone have been reported to be effective in treating delirium tremens acute alcoholic intoxication and even Korsakoff psychosis

### **Additional Problems**

#### *Education*

The Subcommittee on Alcoholism called attention to the lack of adequate education on alcoholism in the training of the physician the nurse and the medical social worker and recommended the compulsory inclusion of this subject in relevant curricula

#### *Scientific information*

Research on and treatment of alcoholism are handicapped by the "comparative isolation of most specialists working in this field" WHO could help to remedy this situation by preparing and publishing classified bibliographies of the literature on alcoholism and by making available to important centres in different regions sets of the "Abstract Archive of the Alcohol Literature" which exist at Yale University Other ways in which the Organization might promote the dissemination of information on alcoholism as recommended by the committee include (1) fostering the creation of a technical non governmental international organization for uniting professional groups and individual experts working on the problem of alcoholism (2) sponsoring a travelling study group on alcoholism to review and report on recent developments in the early treatment and social control of the disorder and (3) collaboration in holding short courses for individuals professionally concerned with the problem of alcoholism

#### *Voluntary organizations*

The Subcommittee on Alcoholism noted the work of lay societies which seek to aid the alcoholic in becoming abstinent particularly that of Alcoholics Anonymous an organization in the USA which many physicians concerned with the treatment of alcoholism consider to be the most hopeful social development which has taken place in the handling of this disorder Although it is doubtful whether such an organization could be transplanted without modification to communities differing in culture pattern from those in which it originated the fundamental principle of the "Alcoholics Anonymous"—help to other alcoholics by those who have successfully overcome the disorder and become abstinent—might well be applied by voluntary societies in other settings

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organic or psychological damage. The real need is for out patient dispensary services to treat cases of alcoholism in the earlier stages. Such a dispensary is best situated in a well-equipped general hospital or alternatively, may exist as an independent institution, it should *not* be associated with a psychiatric hospital predominantly concerned with the care of the psychoses. Whatever its exact situation it should have the orientation of a medical institution, with all that is implied in a doctor/patient relationship. In such a setting ambulatory treatment is effective in a high proportion of cases of early alcoholism and the question of hospitalization seldom arises. The clinic for alcoholics should preferably be under the direction of a psychiatrist particularly interested in the treatment of alcoholism. Next best would be a general physician who is truly interested in the disorder.

In recommending the establishment of adequate networks of dispensary services in general hospitals for the ambulatory treatment of alcoholism in its earliest stages the Subcommittee on Alcoholism pointed out that such services could with the use of existing facilities, be developed at a very small cost and that not only would they be valuable for treating alcoholics but would also offer opportunities for both research and teaching.

Public health services should in addition to developing treatment services for cases of early alcoholism assist in the improvement of the medical and scientific standards of the work of residential institutions for the more advanced cases. Non medical personnel directing such institutions should be specially trained to understand the problems of alcoholism and their work should be carried out under medical supervision.

### *Methods*

Research is needed to determine whether psychological or physiological factors are the basis of addictive drinking. Although recent studies have indicated that the addictive phase of alcoholism may have a physical basis of a constitutional nature, psychotherapy is indispensable in its treatment since the excessive symptomatic drinking which is a prerequisite for addictive drinking is psychogenic or sociogenic or both. Psychotherapy will in most cases need to be supplemented by the type of aid which a social worker can supply.

Certain drugs may prove to be a valuable adjunct to psychological and social therapy. Chief among these is tetraethylthiuramdisulphide which causes a severe somatic reaction when the patient drinks alcoholic beverages after having been given a maintenance dose of the drug. This preparation should be available only to the medical profession and should preferably be employed only on cases in which continued supervision is possible. In more advanced cases of addictive drinking other techniques such as the various forms of aversion therapy—based on the use of apomorphine or emetine—may be more valuable. Hormones such as ACTH and Cor

the desirability of setting up a joint expert committee on sanitation standards for airports with a view to preparing international regulations or recommendations on this subject

The Board approved the exclusion of British Somaliland from the African endemic yellow fever area

### Expert Groups

The Executive Board noted and authorized publication of the reports of the Expert Committee on the International Pharmacopoeia (eighth session) its Subcommittee on Non proprietary Names (second session) the Joint WHO/FAO Expert Committee on Nutrition and the Alcoholism Subcommittee of the Expert Committee on Mental Health

Alcoholism was given particular attention the Director General was requested (1) to make budgetary provisions for a meeting in 1953 of the Expert Committee on Drugs Liable to Produce Addiction for consideration of alcoholism from this aspect (2) to consider publishing a classified bibliography on alcoholism (3) to study the possibility of making available to important libraries sets of the Abstract Archive of the Alcohol Literature which are at Yale University submitting proposals and estimates regarding this project to the ninth session of the Board and (4) to bear in mind the value of international courses and travelling study groups on alcoholism when framing future proposals for the Organization's mental health programme A second meeting on alcoholism by the Expert Committee on Mental Health was authorized for 1951

It was decided that instead of convening a special subcommittee on the chemotherapy of tuberculosis as had been suggested this subject should be placed on the agenda of the Expert Committee on Tuberculosis which is to meet in 1952

The Director General was requested to make provisions for convening an expert committee on rheumatism in 1953

The Executive Board approved the arrangements being made to convene late in 1951 an expert committee to advise ILO on problems relative to health and social insurance

### Other Decisions

The level of expenditure for 1951 was raised to \$6 497 401 to allow supplemental budgets of \$245 344 for relief to the civilian population in Korea and \$20 000 for assistance to refugees in Turkey

The Director General was authorized to appropriate \$30 000 for medical supplies to assist in combating epidemics likely to arise as a result of the acute famine in the State of Bihar India

Co operation with the United Nations was noted with regard to studies on population problems and the Draft Covenant on Human Rights

## EIGHTH SESSION OF EXECUTIVE BOARD

The WHO Executive Board met for its eighth session from 1 to 8 June 1951. Professeur J. Parisot, Dean of the Medical Faculty of Nancy, France, was elected Chairman. Other officers were Dr A. L. Brivo and Dr J. N. Togba, Vice Chairmen, and Dr W. A. Karunaratne and Dr N. Karabuda, Rapporteurs.

### Regional Organizations

The Board authorized the establishment of a Regional Organization for Africa on the basis of the provisions of Article 44 (b) of the Constitution. Selection of the site for a regional office will be made after the regional committee has met and the United Nations has been consulted.

The Director General was requested to contact Member States in Europe regarding the establishment of a nuclear regional office in Geneva and the immediate constitution of a regional organization. It was recommended that European Members should meet in early Autumn 1951 either as a consultative committee or as a regional committee to discuss programme and budget proposals for Europe for 1953.

Dr I. C. Fing was appointed Regional Director for the Western Pacific as of 1 July 1951. The Regional Office will be located in Manila, provided approval is given by the United Nations and a satisfactory host agreement is concluded with the Government of the Philippines.

### Epidemiological Problems

Certain questions arose subsequent to the adoption at the Fourth World Health Assembly of the new International Sanitary Regulations (WHO Regulations No. 2).<sup>1</sup> The Executive Board requested the Director General (1) to ask suitable experts to prepare WHO sanitary regulations to cover the control of insect vectors of malaria in international traffic by air, and (2) to consult expert advisory panels and committees dealing with the quarantinable diseases concerning the technical adequacy of the International Sanitary Regulations, following which he may, if necessary, recommend amendments to the Regulations to the Expert Committee on International Epidemiology and Quarantine. It was suggested that this committee be convened in March 1952 to consider among other matters any objections and reservations to the Regulations which might have been made by Member States.

The Director General was instructed to communicate with the Secretary General of the International Civil Aviation Organization (ICAO) concerning

<sup>1</sup> See page 23

## EVOLUTION OF MORTALITY IN EUROPE DURING THE TWENTIETH CENTURY

A study of a new aspect of the evolution of mortality in Europe during the past fifty years has just been made by Dr M Pascua Director of the WHO Division of Health Statistics in the *Epidemiological and Vital Statistics Report*<sup>1</sup>

Mortality figures by sex and age group were analysed previously<sup>2</sup> The author now undertakes to classify the statistical data according to cause of death The first part of this study—which is briefly summarized here—is devoted to acute diseases of an infectious nature typhoid and paratyphoid fevers scarlet fever whooping cough diphtheria measles malaria smallpox and typhus Tuberculosis and cancer as causes of death will be dealt with in parts 2 and 3 of the study which will be published later

When analysing national data for the purpose of comparison on the international level the statistician is confronted with difficulties and numerous discrepancies The former are due to the relative indicative value of the information concerning population figures and the latter to the lack of uniformity in the notification of causes of death and in their classification For example during the past fifty years five different lists of causes of death have been brought into use by several of the countries studied Progress in medical diagnosis of certain diseases which has naturally had some influence on the notification of causes of death has not had the same effect in all countries It must therefore be admitted that there is a certain relativity about all numerical and other conclusions Certain general trends which are an expression of the facts as they actually exist can however be seen in the figures The study covers the following countries Belgium Denmark England and Wales Finland France Germany Ireland Italy the Netherlands Norway Portugal Scotland Spain Sweden and Switzerland

### *Typhoid and paratyphoid fevers*

The mortality figures for typhoid and paratyphoid fevers in England and Wales fell from 15 per 100 000 inhabitants in 1901 to 0.1 in 1949 in Italy they dropped from 36.1 to 5.4 during the same period Considering all the countries studied there are two different aspects of such decreases in Belgium England and Wales the Netherlands Sweden and Switzerland it has been regular and progressive (with the exception of some outbreaks) in Spain Italy and Portugal on the other hand the decrease has been less pronounced and the death rate has remained at a fairly high level (fig 1)

The Board decided that the Fifth World Health Assembly should be held in Geneva beginning on 5 May 1952. Subjects of the technical discussions at the Assembly will be (1) the economic value of preventive medicine, and (2) methods of health protection for local areas as determined by the health social and economic needs of those areas. It was recommended that for financial reasons, no action should be taken at the present time to make budgetary provisions for holding the sixth and future Assemblies away from Headquarters.

The Executive Board will meet for its ninth session on 21 January 1952 in Geneva.

### MEMBERSHIP OF THE EXECUTIVE BOARD

The designating country is given in parentheses after each member's name. Newly designated members are indicated by an asterisk (\*).

Dr A. L. Bravo, Executive Vice President, Compulsory Social Insurance Fund, Santiago (Chile) (*Vice Chairman*)

\* Professor S. Briskas, Professeur agrégé à la Faculté de Médecine de Paris (Greece)

Professor G. A. Canaperia, Chief Medical Officer, Office of the High Commissioner for Hygiene and Public Health, Rome (Italy)

Dr S. Daengsvang, Deputy Director General, Department of Public Health, Bangkok (Thailand)

Dr C. L. González, Director of Public Health, Ministry of Health and Social Welfare, Caracas (Venezuela)

\* Dr S. Hayek, Director, Epidemiological Service and International Health Relations, Ministry of Health, Beirut (Lebanon)

Dr J. A. Hojer, Director General, Royal Medical Board, Stockholm (Sweden)

\* Professor F. Hurtado, Professor of Paediatrics, School of Medicine, University of Havana (Cuba)

Dr H. Hyde, Medical Director, US Public Health Service, Washington, D.C. (United States of America)

Dr M. Jafar, Director General of Health, Karachi (Pakistan)

Dr N. Karabuda, Deputy Under Secretary, Ministry of Health and Social Welfare, Ankara (Turkey)

\* Dr W. A. Karunaratne, Medical Officer of International Health, Department of Medical and Sanitary Services, Colombo (Ceylon)

\* Professeur M. De Laet, Secrétaire général du Ministère de la Santé publique et de la Famille, Brussels (Belgium)

Dr M. D. Mackenzie, Principal Medical Officer, Ministry of Health, London (United Kingdom)

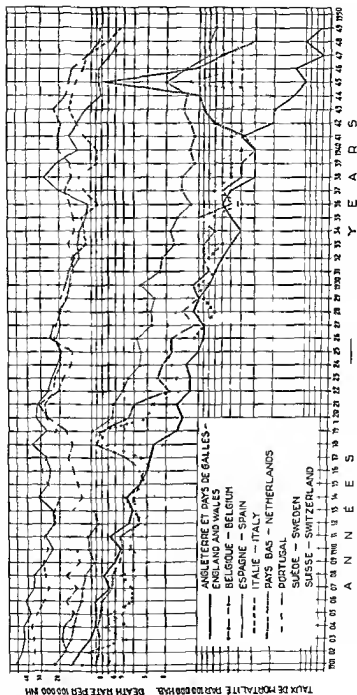
Dr R. G. Padua, Under Secretary of Health, Manila (Philippines)

Professor J. Parisot, Doyen de la Faculté de Médecine de Nancy (France) (*Chairman*)

\* Dr J. N. Togba, Director of Public Health and Sanitation, Monrovia (Liberia) (*Vice-Chairman*)

The member designated by El Salvador was absent.

FIG 2 MORTALITY FROM TYPHOID FEVERS 1901-50





In these latter countries typhoid and paratyphoid fevers are still among the important causes of death and there is a definite need for sanitary reforms and more general education of the public. In Spain the age group from 15 to 25 years has been the most affected during the entire half century. A significant recrudescence was observed from 1937 to 1942 with about 13 000 more deaths than during the five preceding years.

The decline in typhoid and paratyphoid fever death rates—corresponding to a decrease in morbidity—may be attributed to improved sanitary conditions (better water supply, installation of sewerage systems, control of the supply of milk, ice cream, etc.) progress in urbanization, public education, hospitalization of the sick, and more effective medical care.

### *Scarlet fever*

A decrease in the scarlet fever death rates in all countries has been particularly marked during the past twenty years. At the beginning of the century the rate was 5 per 100 000 inhabitants in most countries; during recent years the rate has fallen to 0.1 or 0.2. The decrease has been very great in the lower age groups, particularly in the group from 1 to 5 years. The disease appears to have lost the malignant character which it still assumed in the past century and to have become relatively mild in western Europe. Vigilance is still necessary, however, since a renewal of the virulence of the causative organism is always possible, as has been shown by laboratory experiments and epidemiological observations.

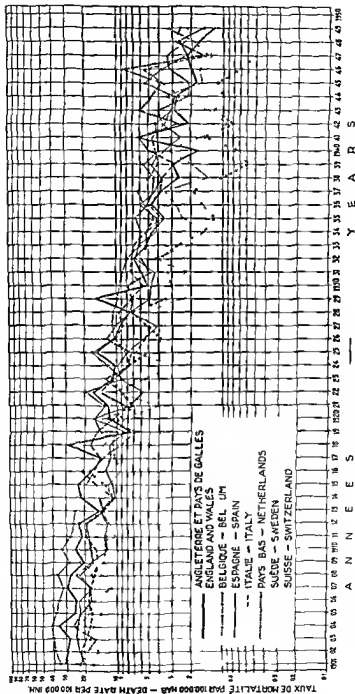
### *Whooping cough*

The number of notified deaths from whooping cough in various countries corresponds fairly closely to the actual situation. Comparison of these figures therefore may be particularly instructive. A remarkable similarity is observed in a considerable lowering of general mortality due to whooping cough—with an analogous decrease in the age group from 1 to 5 years (fig. 2). In Switzerland, for example, 846 deaths were notified in 1901 as against 101 in 1949, i.e. a mortality rate of 15 to 25 per 100 000 inhabitants during the early years of the century and of 1 to 2 during recent years. It is difficult to determine the exact cause of the decrease in whooping cough mortality rates: neither progress in public health nor vaccination (which has not been generally applied) can be credited with such a substantial decline. However, in spite of the relatively favourable situation, the importance of this disease as a cause of death in children should not be underestimated.

### *Diphtheria*

From 1901 to 1930 mortality from diphtheria declined in most countries according to a regular and similar pattern. From 1930 on, the decrease

FIG 3 MORTALITY FROM WHOOPING COUGH 1901-50



became more marked in certain countries (England and Wales Sweden), whereas in others—Italy, for example—it remained more or less stable. It should be noted however, that there was a recrudescence in 1942 and 1944 in Sweden and in the Netherlands (fig. 3).

The decrease in mortality has been particularly marked in the age group from 1 to 5 years. At the beginning of the century nearly 500 infants died annually of diphtheria in England and Wales. During recent years there have been only about 20 victims per year in this age-group.

Treatment of the disease by the Behring antitoxin and preventive immunization—which have not been applied on an extensive scale—cannot explain the decline in the death rate. Isolation and hospitalization of cases as well as the more frequent practice of tracheotomy may have contributed to the drop in the mortality figures but on the other hand it might be supposed that the growth of urban populations and the extension of towns would have augmented the risks of infection. As a matter of fact these factors have not counterbalanced the declining trend of the death rate. Here also one is tempted to assume that there has been some change in the pathogenic power of the diphtheria bacillus, although no knowledge at all is available concerning any biological process which may bring about such a change.

### *Measles*

Notification of cases of measles is unsatisfactory everywhere and figures are completely lacking for many countries. The data available show no very marked reduction in morbidity but the decline in mortality among infants and young children is quite striking. In Germany for example in the age group from 0 to 1 years it fell from about 250 per 100 000 live born children in 1901 to about 40 in 1939. In England and Wales whereas at the beginning of the century the annual number of deaths was about 10 000 during recent years the figure has been somewhere around 300.

### *Malaria*

It is not necessary to stress the decline in malaria morbidity which is commonly known. It is due chiefly to the preventive measures which have been adopted in particular to the use during recent years of residual insecticides. The mortality figures also have shown a marked decrease. In Spain 4 000 deaths were notified in 1901 i.e. a mortality rate of 21 per 100 000 inhabitants. In 1948 only 84 (0.3 per 100 000) were notified. In Italy, the 1901 mortality rate was 41.7 per 100 000 inhabitants. In 1949 it had fallen to 0.2 (101 deaths). However there was a recrudescence during the years 1914-8 when the mortality was almost as high as at the beginning of the century.

Better use of the classical antimalarial drugs and application of new and very effective therapeutic substances may explain this regression.

But the possibility of a natural decline of the disease must not be altogether discarded since such phenomena have already been observed in the history of this endemic disease

### *Smallpox*

In general there has been a considerable decrease in mortality from smallpox during the half century. In Spain for example the figure fell from 29.7 per 100 000 inhabitants in 1902 to 0.0 since 1930 (with the exception of the years 1939-42 when there was a recrudescence). In 1947, 1948 and 1949 the mortality rate was 0.0 per 100 000 inhabitants in Belgium, England and Wales, France, Germany, Italy, Spain, Sweden and Switzerland. In most countries annual deaths from smallpox have been very few during recent years.

It would seem justifiable to attribute the reduction in the smallpox death rate throughout Europe to vaccination which has been generally and systematically applied to whole populations. Vaccination has played a preventive role on the one hand and on the other it has reduced the mortality among vaccinated persons who have contracted the disease. However it cannot be ignored that vaccination has not been general in all countries and that other factors of an unknown nature may have contributed to the lowering of the mortality rate.

### *Typhus*

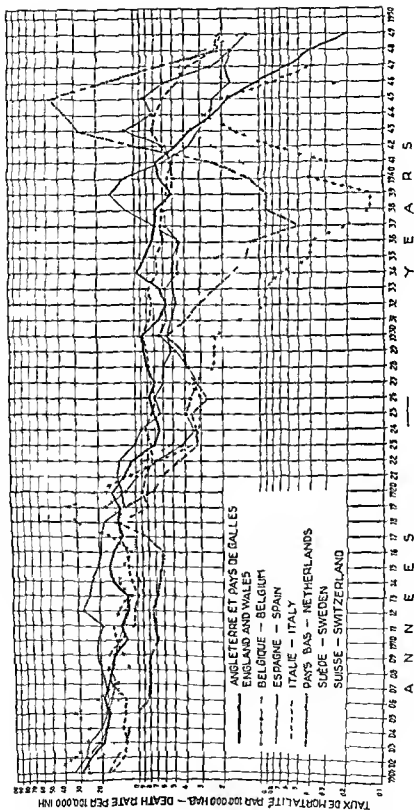
The typhus epidemics which broke out in Italy in 1919 and in 1943, 4 in Portugal in 1918, 9 in Germany in 1915, 9 and in Spain in 1941, 3 after periods when mortality had been extremely low confirm the well established fact that typhus epidemics are closely associated with war, famine and overpopulation. Thus the death rate in Portugal was 28.7 per 100 000 inhabitants in 1918 whereas it was 0.1 in 1916, 2.1 in 1920 and 0.0 in 1949. The recent application of DDT and present knowledge of the epidemiology of the disease make it improbable that there will be any serious epidemics in times of peace and security.

\* \* \*

This study contains numerous tables and detailed mortality analyses. The reader who wants a more exact picture of the situation as shown by the figures should consult the original article.

---

FIG 4 MORTALITY FROM DIPHTHERIA 1901-50



histopathology and visiting nurse services. As these services are developed they provide a training ground for tuberculosis personnel from other Latin American countries.

UNICEF is furnishing supplies and equipment at a value of \$115 000 for this project WHO under the United Nations Technical Assistance Programme is providing the services of a bacteriologist, a lung physiologist, a pathologist and two public health tuberculosis nurses at a total cost of \$40 000. The Government of Ecuador is undertaking construction work and other expenses amounting to approximately \$116 600.

#### *El Salvador*

Team personnel have been trained in Ecuador for a BCG vaccination project in El Salvador in which the goal is to test approximately 877 000 children in a two-year period vaccinating non reactors with BCG and following up by x ray examination and bacteriological tests those who react positively to the tuberculin test.

During operations over about a seven month period in San Miguel 15 000 persons in a population of approximately 22 000 were examined. In the BCG phase of the campaign which began late in 1950 more than 4 000 persons were vaccinated.

UNICEF is providing \$47 000 for this programme and the Government of El Salvador is furnishing personnel, supplies and services valued at about \$57 000.

#### *Jamaica*

In Jamaica a WHO/UNICEF tuberculosis-control project will aim to develop modern methods of tuberculosis control to tuberculin test the population under 20 in urban areas and under 30 in rural areas (about 600 000 persons) to follow up the tests by radiographical and bacteriological tests to provide ambulatory treatment at rural health centres for the cases discovered and hospitalization where necessary and possible to develop and extend the services of the present bacteriological tuberculosis laboratory and to train local professional and auxiliary personnel and later personnel from other Caribbean Islands in modern methods of tuberculosis control. One doctor and two nurses have gone to Ecuador to study the BCG campaign there upon their return they will train three additional local teams.

UNICEF aid in this programme will amount to \$113 000 and the Government of Jamaica will provide personnel services and facilities valued at about \$157 000 over a two-year period.

#### *Mexico*

UNICEF has allocated \$160 000 to help expand and standardize BCG vaccine production at the BCG laboratory in Mexico City and to conduct a mass vaccination campaign. This project was begun with the aid of the Joint Enterprise in July 1950.

#### *Formosa*

Dr O. A. Hagen (Norway) and Miss E. Friis (Denmark) experienced workers in BCG vaccination projects have gone to Formosa to direct a tuberculosis-control programme in which 800 000 children will be tested. Negative reactors will be vaccinated and positive reactors will undergo x ray examination—by miniature x ray (70 mm) with subsequent large film examination of suspected cases. Medical care and extra nourishment will be given to those who need them and the more serious cases will be admitted to the 30-bed children's tuberculosis hospital which has been equipped by UNICEF.

The WHO team plans to remain in Formosa for six months during which time local teams will be trained to carry on the work.

# Notes and News

## WHO/UNICEF Tuberculosis Projects

### Burma

A five member WHO team has gone to Rangoon Burma to help organize an anti tuberculosis service for which UNICEF is providing equipment and supplies. Team members are Dr B N Papanicolaou (Greece) senior adviser, Dr C. Vujil y Tardón (Chile) epidemiologist, Dr E Nassau (United Kingdom) bacteriologist, on short term loan from the WHO/UNICEF Tuberculosis Centre at Delhi India, Miss E. M. Astrup (Norway) laboratory technician and Mr D. R. Ernberg (Sweden) x ray specialist.

A new tuberculosis training and demonstration centre will be established which will be under the direction of Dr Than Aung, head of the present tuberculosis clinic in Rangoon. The Burmese Government is to provide a "matching" team for the project which will include in addition to Dr Than Aung a bacteriologist, an epidemiologist, and a trained tuberculosis nurse.

It is believed that tuberculosis is responsible for more deaths in Rangoon than any other single cause. It takes a particularly great toll among people below 20 years of age.

The aims of the new training and demonstration centre will be (1) to provide a modern and effective tuberculosis dispensary and domiciliary service for Rangoon with emphasis on home treatment, (2) to train personnel in all phases of tuberculosis control for duty elsewhere in Burma, (3) to set up in Rangoon a modern laboratory and x ray equipment for the diagnosis of tuberculosis and (4) to initiate a scheme for the protection of schoolchildren and young people by BCG vaccination.

### Costa Rica

A two year programme which is being initiated in Costa Rica will endeavour to tuberculin test 260 000 children and to vaccinate the non reactors with BCG. This project will be integrated with the general tuberculosis services of the government, and it is planned to follow up cases of possible infection by means of x ray examination.

One doctor and two nurses will go to Ecuador for three months of training and will upon their return train other teams in Costa Rica. UNICEF has allocated \$38 000 for this programme and the government will furnish supplies and services valued at approximately \$55 000 for the two-year period.

### Ecuador

The WHO/UNICEF tuberculosis-control project in Ecuador includes a BCG vaccination campaign and expansion of existing tuberculosis services and facilities. UNICEF has allotted \$300 000 for the BCG phase in which WHO will help the government tuberculin test 1 100 000 children and adolescents, inoculate non reactors with BCG and develop production facilities for BCG vaccine.

The actual testing and vaccination began in July 1950 in Guayaquil. In April of 1951 27 national and 12 international team members were working together in the campaign which is to continue for another year.

It is hoped that the laboratory in Guayaquil will be producing BCG vaccine by the end of 1951. In the meantime the vaccine is being supplied from Mexico.

The objective of the general tuberculosis-control programme is to assist the Government of Ecuador in developing bacteriological diagnostic services, pulmonary physiology

The team in the Malabar district Madras reports the great satisfaction of the inhabitants of the Attappaddy region after the spraying of that area. The control of malaria resulted in a increase in the cost of the land in the sprayed area from 20 to 50 Rs per acre

FIG 6 MALARIA TEAM ACTIVITIES II



A public health nurse attached to the team working in the Malabar district (Madras) India examines a child during one of her home visits

### Pakistan

Information concerning the activities of the demonstration team which concluded its work on 31 January 1951 has revealed that the cost of malaria and kala azar-control operations in Iswarganj Thana came to 8 annas per person per year (about \$0.15). It was shown that using DDT at the rate of 150 mg per square foot once a year stops transmission of both infections. It has been calculated that the loss of wages of the adult rural labourer due to malaria would be sufficient to pay for all expenses of the DDT spraying without taking into account savings on drugs and funerals or the economic benefits of increased agricultural production.

The reaction of the people to the campaign was studied by canvassing 360 families. 80% of the heads of the families agreed to contribute about 5 annas per capita per year for the continuation of the malaria-control operations, i.e. they would be prepared to pay about 62% of the expenses of the campaign.

### Yaws Control in Indonesia

A report from one of the WHO/UNICEF advisers on the yaws (framboesia)-elimination programme in Indonesia<sup>1</sup> gives a description of how the team actually works



## Malaria Control Teams

### *Afghanistan*

Winter activities of the malaria-control demonstration team in Afghanistan included typhus control by means of DDT dusting. About 90 000 persons were dusted in Kabul in Kandahar during the month of January about 15 000 persons were dusted. There were no indigenous cases of typhus during the winter in Kandahar and only a couple of cases were reported from Kabul. Afghan authorities who previously believed that the only effective means of controlling typhus epidemics was vaccination have been convinced by this demonstration that delousing operations with DDT properly carried out can prevent the occurrence of typhus in a community which year after year suffered from the ravages of this disease during the winter.

FIG 5. MALARIA TEAM ACTIVITIES. I



Nurses attached to malaria control teams also engage in maternal and child health activities. Here one of the nurses from the team based at Malnad (Mysore) India greets fathers who have brought their infants to the weekly clinic held by the team's nurses in a village school.

### *India*

Plague-control measures undertaken with the assistance of the Mysore Public Health Department in Shimoga Town by the WHO/UNICEF malaria-control team based at Malnad Mysore resulted in the abrupt control of an epidemic of bubonic plague and in the reduction of the rodent flea index to insignificant levels for ten months. The cost of these operations was about \$0.035 per capita.

Observation of the results of treatment over a one month period have indicated that, in about 500 cases given two-shot treatment 97 / of the cases were cured of surface symptoms or improved (67 / cured and 30 / improved) in an equal number of cases given one shot treatment about 95 / were cured or improved in about the same proportion

FIG 8 YAWS CONTROL IN INDONESIA II



The lesions on the face of this child from South Borneo are an evident sign of famboesia

The number of persons inspected per month has now reached more than 80 000 the number treated 15 000 More than 700 000 persons have been examined and more than 150 000 treated since the beginning of the campaign The WHO senior adviser Professor C M Hasselmann and the national director of the programme Dr R Kodijat have expressed satisfaction at the progress made in the four areas where activities are now in progress—in Java (provinces of Djakarta Jogjakarta and Sourabaya) and in Borneo Satisfaction has also been expressed by the director of the UNICEF Far East Headquarters who has stated that "no other programme undertaken has shown more results for the money than this one in the alleviation of suffering in children"

### Biological Standardization

#### *Androsterone*

The international standard preparation of androsterone will be withdrawn when the present stock becomes exhausted The WHO Expert Committee on Biological Standardization after careful consideration has decided that it is no longer necessary to

"in the field" A survey group of three male nurses or "mantris" goes first to each village and with the aid of the village headman and secretary inspects all the inhabitants and diagnoses and registers the cases of yaws. As the villagers file past a table at which the mantris are seated, one of the mantris inspects and makes the diagnoses while another records the names of those who suffer from yaws. The third mantri stands by to relieve

FIG 7 YAWS CONTROL IN INDONESIA - I



Inhabitants of a village in Indonesia are examined by Dr. T. Gutha (left) Chief of the Venereal Disease Section at WHD Headquarters and Dr. R. Kodijat (right) national director of the Indonesian treponematoses control programme

either of the others. All take turns at performing the two tasks. About 750 persons can be observed, diagnosed and registered daily by the survey team.

On the third day the rest of the team arrives—the supervising doctor or team leader and four nurses. One of the original three mantris is retained, making a total of five. The team now works at two tables: at the first, or checking table sit the village headman, the village secretary and the mantri retained from the survey team, who helps identify the persons previously observed by his colleagues and himself; at the second table are the doctor and a secretary. The doctor confirms the diagnoses, the cases are registered and the patients then proceed to the injection room.

In the injection room penicillin is administered at the rate of about one patient per minute. Adults are given 4 ml (1 200 000 units), children 2 ml (600 000 units) and babies 1 ml (300 000 units). A 10-ml syringe and multiple needles are used and great care is taken to make sure that the equipment is properly sterilized and that each needle is used only once before being returned to the sterilizer.

A week after the first injections the team returns to give follow up treatment and to administer penicillin to patients who might have been missed previously.



# CHRONICLE OF THE WORLD HEALTH ORGANIZATION

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provide an international biological standard of androsterone for the assay of therapeutic preparations

*Anti A and anti B blood grouping sera international standards*

International standards have been established for anti A and anti B agglutinating sera. Samples of these blood grouping sera may be obtained on application to the national control centre appointed in each country for the distribution and maintenance of WHO international standards

*Antibiotics*

International standards already exist for penicillin and streptomycin and will shortly be established for dihydrostreptomycin, aureomycin and terramycin. Reference preparations for chloramphenicol and bacitracin are also in the course of preparation.

In addition, the WHO Expert Committee on Biological Standardization considers it desirable to form a collection of specimens of new antibiotics, the clinical and scientific value of which has been described in the medical and technical press. Samples of such preparations could thus be made available for comparison and exchange of information among interested research workers. WHO invites scientific workers to contribute specimens of their antibiotics to this collection, which it will hold for international distribution at the National Institute for Medical Research, Mill Hill, London.

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## THE FIRST INTERNATIONAL PHARMACOPOEIA

C H HAMPSHIRE CMG MB BS BSc

*Formerly Secretary of the British Pharmacopoeia Commission  
General Medical Council Office London*

The publication of an international pharmacopoeia is a definite contribution to the fulfilment of the first objective of the World Health Organization—the attainment by all peoples of the highest possible level of health. This book which is the result of work begun in 1937 by a technical commission of the Health Organization of the League of Nations represents an endeavour to further the unification of the pharmacopoeias of the world. In May 1945 during the lull in its work caused by the second World War the commission issued an interim report in which the following reasons for unifying pharmacopoeias are set out.

There is a desire for a uniform system of nomenclature and it is specially urged that the same name should in all countries designate a drug of the same strength and composition. Differences in national standards for widely used materials constitute a source of danger to travellers who may need to have the same prescription dispensed in different countries not only because of the possible supply of a drug differing in strength from that to which the patient is accustomed but also because of delays in receiving medicines that may have to be specially made or procured. Such differences by causing confusion and misunderstanding are also a hindrance to the spread of medical and pharmaceutical knowledge. A state of affairs under which the same supply of a drug or chemical may be accepted in one country and rejected in another may lead to the retention of lower standards in manufacture whilst the maintenance of a common high standard would tend to economy of production and would facilitate commerce between the nations.<sup>1</sup>

The modern developments of travel by air and the general increase in rapidity of transport strengthen the cogency of these reasons.

## Brief History

Projects for the preparation of an international pharmacopoeia were mooted from time to time in the latter half of the 19th century and some unsuccessful attempts were made. Later efforts to bring about international uniformity were more restricted attention being concentrated on the more potent drugs. Following the Brussels Conference of 1902 the first International Agreement for the Unification of the Formulae of Potent Drugs was produced and signed in 1906. The strengths of preparations and methods of procedure specified in this document were

## RECENT AND FORTHCOMING MEETINGS

1951

7-25 May	Fourth World Health Assembly Geneva
18 May	WHO Regional Committee for the Western Pacific first session Geneva
24-29 May	WHO Consultative Committee for Europe first session Geneva
1-18 June	WHO Executive Board eighth session Geneva
30 July-4 August	WHO Expert Committee on Insecticides third session Savannah Ga
1-5 September	WHO Consultative Committee for Europe second session Geneva
18-21 September	WHO Regional Committee for the Western Pacific second session Manila
20-25 September	WHO Regional Committee for South East Asia fourth session Rangoon
24-26 September	WHO Regional Committee for Africa first session Geneva
15-20 October	WHO Expert Committee on Environmental Sanitation second session Geneva
15-20 October	WHO Expert Committee on Mental Health Alcoholism Subcommittee second session Copenhagen
15-20 October	WHO Expert Committee on Nursing second session Geneva
22 October	European Seminar on Alcoholism Copenhagen
4 November	
29 October	WHO Expert Committee on the International Pharmacopoeia ninth session Geneva
3 November	
November	WHO Expert Committee on Cholera first session New Delhi
5 November	WHO Expert Committee on the International Pharmacopoeia, Subcommittee on Non Proprietary Names third session Geneva
5-10 November	WHO Expert Committee on Maternity Care first session Geneva
12-17 November	Second Seminar for European Sanitary Engineers Rome
19-23 November	WHO Expert Committee on Drugs Liable to Produce Addiction third session Geneva
21-29 November	WHO Conference on Morbidity Statistics
	WHO Expert Committee on Health Statistics third session Geneva
26-30 November	WHO Expert Committee on Trachoma first session Alexandria
28 November	WHO Expert Committee on Insecticides fourth session Geneva
4 December	
December	WHO Expert Committee on Biological Standardization fifth session Geneva
3-7 December	WHO Expert Committee on Public Health Administration first session Geneva
3-8 December	WHO Expert Committee on the Physically Handicapped Child first session Geneva

FIG 1 TITLE PAGE OF THE PHARMACOPOEA INTERNATIONALIS  
VOLUME I

*BULLETIN OF THE WORLD HEALTH ORGANIZATION*  
*SUPPLEMENT 2*

# PHARMACOPOEA INTERNATIONALIS

EDITIO PRIMA

Volumen I

INTERNATIONAL PHARMACOPOEIA

FIRST EDITION

Volume I



WORLD HEALTH ORGANIZATION

PALAIS DES NATIONS

GENEVA

1951



adopted in many pharmacopoeias. The second international conference was held in 1925 and the second International Agreement which resulted from its deliberations, was completed in 1929.

The work which has resulted in the production of the *Pharmacopoea Internationalis* arose from this Agreement which has considerably influenced the various national pharmacopoeias. The main provisions of the second Agreement dealt with the unification of methods of preparation and strengths of drugs of nomenclature and of maximal doses. There are also the important provisions that an international organization for the unification of pharmacopoeias should be set up and that the League of Nations should be asked to constitute a permanent secretariat.

The primary purpose of the League of Nations commission was to revise and extend this International Agreement and an early decision was that this could best be done by presenting the decisions as to formulae and strengths of drugs names and doses in the form of a book—to be called the International Pharmacopoeia—produced on the lines of the most recent national pharmacopoeias with complete monographs on the drugs specifying standards tests and assays and general notices appendices on reagents standard methods special tests and assays etc.

### Contribution of WHO

After the war in 1947 the Interim Commission of the World Health Organization took over the work on pharmacopoeias previously undertaken by the Health Organization of the League of Nations and set up an Expert Committee on the Unification of Pharmacopoeias to continue the work of the League's technical commission with the following terms of reference: "to produce a draft International Agreement for the Unification of Pharmacopoeias modifying and extending the existing Agreement for the Unification of the Formulae of Potent Drugs and to present the draft Agreement as an International Pharmacopoeia similar in form to the present day national pharmacopoeias."

Since then the membership of the committee has been increased, the Permanent International Pharmacopoeia Secretariat has been established and every encouragement and help has been given towards the production of the book which is now ready in its English and French editions. A Spanish edition is in preparation.

The first step in preparing the *Pharmacopoea Internationalis* was, of course the selection of the drugs to be described. In making the selection all the recent national pharmacopoeias as well as a number of official lists current in various countries were examined. Valuable assistance was given by the International Pharmaceutical Federation. At a later stage

the committee was helped by suggestions from the WHO expert committees which deal with such subjects as biological standardization malaria tuberculosis venereal diseases and drugs liable to produce addiction

### Description of the *Pharmacopoea Internationalis*

Drugs of long established therapeutic interest which are common to a number of national pharmacopoeias are included in the *Pharmacopoea Internationalis* (Ph I) but the scope is not restricted to these some drugs of recent introduction which appear likely to be generally accepted for later pharmacopoeias are also described Neither is the scope of the Ph I confined to therapeutic agents some substances used for diagnostic purposes and certain materials required for pharmaceutical purposes are likewise included

The book comprises 199 monographs containing descriptions standards tests and assays designed to provide as complete a control specification as possible for each drug There are 43 appendices defining general tests and methods and giving other data which are necessary for the understanding and use of the monographs The methods described in the appendices have been made as complete and definite as possible so as to offer precise guidance to underdeveloped countries

The monographs form a representative selection of the most valuable members of the various pharmacological groups—anaesthetics analgesics antimalarials hypnotics etc Besides the vegetable inorganic and organic substances which are described in most pharmacopoeias sera vitamins hormones and a selection from the range of sulfonamides and barbiturates are included

The vegetable drugs of the *Pharmacopoea Internationalis* are restricted to those which have definite therapeutic activity and can be assayed chemically or biologically e.g. opium digitalis ergot belladonna etc An attempt has been made to give complete scientific descriptions with details of chemical tests and assays

Galenical pharmacy in which those responsible for the Agreement of 1929 showed much interest has little place in the *Pharmacopoea Internationalis*

In completing the monographs the various tests and assays have as far as possible been carried out practically on samples of the drugs actually on the market so that the *Pharmacopoea Internationalis* is not merely a compilation made at the desk and in the committee room but is an authoritative work containing standards and methods which have been confirmed at the laboratory bench

In accordance with the international character of the book the recommendations and rulings of responsible international bodies have been followed for example in the botanical names of drugs in chemical names

FIG 2 A PAGE FROM VOLUME I OF THE ' PHARMACOPOEA INTERNATIONALIS '

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PHARMACOPOEA INTERNATIONALIS

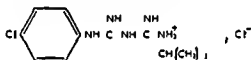
ethanol (50 per cent ) R melting range of the crystals after drying at 100° 236° to 240°

Melting range Of the higher melting form 127° to 131° melting temperature of the lower melting form about 121°

Specific rotation Determined at 20° in a 2.0 per cent w/v solution of the substance dried over sulfuric acid R for four hours in dioxan R +172° to +182°

Storage Progesterone should be kept in a tightly closed container protected from light

# PROGUANILI HYDROCHLORIDUM



$\text{C}_{11}\text{H}_{16}\text{N}_5\text{Cl}$  HCl

Mol. Wt. 290.2

Proguanil Hydrochloride is *N*<sup>1</sup> 4-chlorophenyl *N*<sup>3</sup> *iso* propyldiguanide hydrochloride. It contains not less than 98.0 per cent of  $\text{C}_{11}\text{H}_{16}\text{N}_5\text{Cl}$  HCl.

Description Colourless fine crystals or a white crystalline powder odourless taste bitter.

Solubility Soluble in about 80 parts of water more soluble in hot water soluble in ethanol (95 per cent ) R practically insoluble in chloroform R and in ether R.

## Identification

A To 10 ml of a saturated solution in water add 5 drops of iodine TS an orange brown precipitate is produced.

B To 10 ml of a saturated solution in water add 5 drops of potassium ferrocyanide TS previously rendered slightly acid to litmus TS by the addition of dilute nitric acid R a white precipitate is produced which dissolves on the addition of a few drops of dilute nitric acid R.

C To 10 ml of a saturated solution in water add 5 drops of potassium dichromate TS a yellow precipitate is produced which dissolves on the addition of a few drops of dilute nitric acid R.

up to date. It is hoped that the national health and pharmacopoeial authorities of such countries will decide to adopt the Ph I as a whole and in its present state as their official pharmacopoeia. In such cases arrangements could be made for any of the editions to be supplied in large quantities at special low rates.

It should be mentioned that all countries are at liberty to make use of the material in the *Pharmacopoea Internationalis* when compiling their national pharmacopoeias without consulting the World Health Organization but that any country wishing to publish a translation of the book in its national language under the title *Pharmacopoea Internationalis* must obtain WHO's consent and approval of the translation.

## NUTRITION AND PUBLIC HEALTH

The report on the second session of the Joint FAO/WHO Expert Committee on Nutrition held in Rome from 10 to 17 April 1951<sup>1</sup> has recently been published as No. 44 of the *World Health Organization Technical Report Series*. The report reveals the ever increasing emphasis placed on nutritional problems in the public health programmes of a large number of countries. Many governments have in fact requested technical aid from the specialized agencies. Thus WHO has collaborated by an inquiry and the dispatch of laboratory equipment in the establishment of a nutrition institute at Zagreb (Yugoslavia) the Organization has sent an expert in dietetics to the Medical College Hospital Calcutta to organize a training course for hospital dieticians and in co-operation with FAO WHO has given technical advice to the Egyptian Government on the development of public nutrition services.

The inquiry on endemic goitre carried out under WHO auspices in Ceylon and in Central and South America has aroused public interest

Th f ll w g took p rt th l n

M mb

FAO

Pr f o M J L D I St t Ad n N t t M stry f Ag c l re Fish d Food Th  
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Pr fes o A H Bey Tech cal Ad se f h P m t Com n o N trnt F lly f  
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f of Ag ult re W h st DC USA  
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WHO

Dr J F Bock P f fth P t of M d U rs y f C pe T wn U of S th Afr ca  
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ty f M t M pol M n USA (Ch m )

(c l d p 62)

and formulae in the atomic weights used, and in certain methods of analysis. The international biologically standardized preparations and units are those worked out by the Expert Committee on Biological Standardization and officially adopted by the World Health Organization. Review by that committee of the monographs and appendices relating to substances which are tested and standardized by biological methods has contributed considerably to the completeness of these sections of the book.

The international names of drugs are in Latin, the traditional language of medicine and pharmacy. Although the use of Latin names is being abandoned by certain national commissions, that language still remains the best medium for international purposes despite difficulties which arise in finding suitable latinized names for certain new products.

Very few synonyms are given in the *Pharmacopoea Internationalis* because of limitations of space, but a comprehensive list of alternative names has been prepared for publication.

The desire for uniformity in maximal doses expressed in the Agreement of 1929 has been extended in the *Pharmacopoea Internationalis* to include usual doses. A table gives the recommended usual and maximal doses for adults of all the drugs described in the book, figures for single and daily doses are stated according to the mode of administration. An introductory statement indicates the procedure to be adopted when a physician desires to prescribe a larger dose than the stated maximum. Much care has been given to the compilation of this table. Leading physicians in Europe and America have been consulted through the members of the committee, and the World Medical Association has contributed useful comments.

### Use of the *Pharmacopoea Internationalis*

The *Pharmacopoea Internationalis* has been prepared in the hope that its nomenclature, descriptions and standards will be adopted by the national pharmacopoeia commissions. Its acceptance by those countries which already have a complete and up to date pharmacopoeia would do much to unify drug standards throughout the world. It is obvious that the *Pharmacopoea Internationalis* cannot be in legal conflict with national pharmacopoeias since in any country it can have only the authority which the government of that country decides to give to it. The Third World Health Assembly has formally recommended the acceptance of the book by its Member States.<sup>a</sup>

The *Pharmacopoea Internationalis* should be especially useful to countries which have yet to develop a national pharmacopoeia or in which the national pharmacopoeia is in need of revision in order to bring it

<sup>a</sup> Resolution WHA3.10 *Off. Rec. W. H. O.* 23. 19

# Kwashiorkor

During the mission which they carried out under the auspices of WHO and FAO Dr J F Brock Professor of the Practice of Medicine University of Cape Town Union of South Africa and Dr M Autret Chief Area and Field Branch Nutrition Division FAO visited the Belgian Congo French Equatorial Africa French West Africa Gambia the Gold Coast Kenya Liberia Nigeria Ruanda Urundi and Uganda The report of these two experts shows that the incidence of the disease which exists in all the regions of Africa visited is directly related to diet Kwashiorkor occurs in a particularly severe form among peoples whose basic nutrition consists of manioc plantains yams and maize substances which are poor in proteins both qualitatively and quantitatively Animal proteins such as those contained in meat fish and milk have a protective effect Among the characteristic symptoms of kwashiorkor are retarded growth in the late breast feeding period certain changes in skin and hair pigmentation oedema necrosis or fibrosis of the liver and various dermatoses Dyspigmentation is considered to be an essential symptom In regions where the disease is prevalent cirrhosis and primary carcinoma of the liver are found among adults in a higher proportion than in regions free from the disease However a direct connexion between these complaints and kwashiorkor has not been definitively established In Africa the disease appears among children aged from one to five a period during which curiously enough a minimum of proteins is supplied by the diet although requirements are at a maximum It is possible that a deficiency of an essential amino acid such as methionine may be one of the fundamental causes of the disease

A striking fall in mortality was brought about in certain regions by the provision of dried skim milk for children This very simple treatment is unfortunately too little known in those regions where it should be applied

Consequently the committee recommended that governments draw the attention of health services and physicians to the symptoms of the disease and to the ease with which it may be treated with skim milk it also recommended that the report by Brock & Autret should be widely distributed The preventive measures advocated for Africa are probably applicable to other parts of the world as was stressed by the committee Essentially they consist in making generally available those foodstuffs which can prevent the appearance of the disease Fish may be an essential food since it is easier to obtain fish rapidly than to increase production of meat and milk Millets sorghums and rice should replace manioc wherever possible The cultivation of green vegetables in rural areas and in village kitchen gardens should be expanded and the consumption of

and given rise to the hope on the part of the governments of being able one day to resist the development of this disease by relatively simple preventive measures

An inquiry into kwashiorkor which is probably 'the most serious and widespread nutritional disorder known to medical and nutritional science' was carried out in Africa by WHO and FAO experts responsible respectively for studying the clinical features of the disease and its prevention and relation to nutrition. According to their report the conclusions of which are summarized below, it now appears possible to combat this disease by a simple treatment and to prevent it by improved diet.

These various achievements are reviewed in the report and programmes for fresh activities are described. A brief summary of some of the main questions discussed by the joint committee is given below.

### Endemic Goitre

Brazil, Ceylon, Colombia, Ecuador, Guatemala and Mexico were visited by a WHO consultant accompanied by local experts whose task it was to determine the incidence of endemic goitre in these countries and to plan in conjunction with the governments the practical application of preventive measures. It is well known that prevention which is very simple in principle consists in adding iodine to salt intended for consumption. However although the iodization of refined salt is easy and is generally practised, the addition of iodine to crude salt which is used as a condiment in a very large number of countries is still not possible by simple and economical methods. During the past year WHO has encouraged research on this problem. One experiment consisted in pouring a solution of potassium or sodium iodate on to salt pans during evaporation. The results showed that a large part of the iodate remains in solution and is not absorbed by the salt. This procedure consequently had to be given up but other methods are being studied.

(continued from p. 261)

Professor B. S. Platt, Professor of Human Nutrition, London School of Hygiene and Tropical Medicine  
 Director, Human Nutrition Research Unit, Medical Research Council, London, United Kingdom  
 Dr. A. Riquelme, Director, Department of Nutrition, National Public Health Service, Santiago, Chile

#### Co-opted members

Professor G. Bergami, Professor of Biochemistry and Physiology, Director, Istituto della Nutrizione del Consiglio Nazionale delle Ricerche, Rome, Italy

#### Observers

Dr. B. Boré, Medical Adviser, UNICEF/WHO, UNICEF Headquarters, New York  
 Dr. G. Gallone, Director, Rome Office, International Labour Organization  
 Dr. L. Laponi, Director, Health Service, Central Committee of the Italian Red Cross, Rome, Italy  
 Professor G. de Marzi, Director, General Office of the High Commissioner for Food, Rome, Italy  
 Dr. N. S. Scrimshaw, Chief, Nutrition Section, Pan American Sanitary Bureau (WHO Regional Office for the Americas), Washington, D.C., USA  
 Director, Institute of Nutrition of Central America and Panama (INCAP), Guatemala City, Guatemala  
 Dr. H. Wickwar, Department of Social Affairs, United Nations, New York

#### Secretaries

Dr. W. R. Aykroyd, Director, Nutrition Division, FAO  
 Dr. F. W. Clements, Chief, Nutrition Section, WHO

## Prevention and Treatment of Severe Malnutrition During Periods of Disaster

Following a recommendation by the Third World Health Assembly a group of specialists and Professor A B Keys Director Laboratory of Physiological Hygiene School of Public Health University of Minnesota Minneapolis USA were given the task of submitting reports on various methods of preventing and curing severe malnutrition building up food reserves preservation and distribution of available stocks of food treatment of patients suffering from the consequences of famine organization of food relief in the event of famine etc These reports have been amalgamated and endorsed by the committee they will appear as No 45 of the *World Health Organization Technical Report Series*

### Other Questions

Nutrition as a subject in medical curricula training in nutrition in underdeveloped areas the role of applied nutrition in programmes for promoting social and economic progress nutritional aspects of the welfare of the aged—all these questions were also examined by the joint committee and form the subject of recommendations included in the report

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## CARDIOLIPIN ANTIGENS

The manufacture of cardiolipin and lecithin in various parts of the world is increasing as the use of these two substances in the serodiagnosis of syphilis becomes more general a number of countries have now undertaken their preparation The improvements which cardiolipin and lecithin based antigens have brought to diagnosis by increasing specificity and sensitivity are based primarily on the purity of the antigen components As emphasized in the report on the second session of the Subcommittee on Serology and Laboratory Aspects of the Expert Committee on Venereal Infections and Treponematoses it is therefore of the utmost importance that the cardiolipin and lecithin be subject to control since the advantages in using cardiolipin antigens would be lost if unsatisfactory products were placed on the market or produced in small lots in laboratories for local use without appropriate controls <sup>1</sup>

The chemical and serological control of cardiolipin and in some cases of lecithin produced in the USA and in certain other countries has up



ground nuts encouraged. These preventive measures could be carried out by way of illustration in the regions planned as demonstration areas in the FAO programmes. In the majority of hospitals and dispensaries in the affected regions skim milk, the best therapeutic agent at present known for the treatment of kwashiorkor is not available. It should therefore be provided. Nevertheless the use of skim milk should be considered as an immediate and temporary measure only, as all efforts should be directed towards improving the local diet by the production and consumption of substances rich in proteins.

### Assessment of Nutritional Status

WHO had been asked to collect information on surveys of nutritional status already carried out at the national level and to study the way in which this problem had been approached. The results of these researches were submitted to the committee which approved them and incorporated them in its report in the form of directives for persons responsible for assessing nutritional status at a regional or national level. Inquiries so far carried out have been limited to detecting deficiencies and deficiency diseases. A further step should be taken: the determination of the relationship of nutrition to the physical and mental potential of the individual as well as to his resistance to disease.

Among the criteria which are of value in such an assessment are mortality and morbidity rates, the study of the growth of infants and children and possibly the number of premature births and stillbirths. Clinical study includes general inspection as well as detailed physical examination of the condition of the skeleton (for the detection of symptoms of rickets), the teeth, the muscles, the epithelial tissues, the glands and their secretions. It is recognized that malnutrition may be the cause of symmetrical dermatosis of the pellagroid type, follicular keratosis (lack of vitamins A or C), dyssebacia (ariboflavinosis) and Bitot's spots (vitamin A deficiency). After detailing the easily detectable symptoms of malnutrition which affect the digestive system (changes in the lips, tongue, or teeth) and the cardiovascular system (tachycardia, oedema, etc.) the report mentions the neurological symptoms: those revealed by tests for knee and ankle jerk, paraesthesias, photophobia, amblyopia and optic atrophy. Among endocrine disturbances attention should be paid to endemic goitre which should be considered as a public health problem when an enlargement of the thyroid gland is observed in more than 5% of adolescent girls in a population group.

Clinical observations should be followed by physiological tests to reveal vitamin deficiencies and laboratory tests. The latter are intended to confirm clinical diagnosis, to detect abnormalities before they assume a clinical form or to diagnose parasitic infections. Analyses may be made, for example, for serum protein, for iron and for serum phosphatase.

standard lots Both complement fixation and flocculation tests are used An antigen mixture is prepared according to a previously determined formula the new lot being used instead of the corresponding reference standard component this antigen is compared with one composed entirely of reference standard materials in such a way as to show whether stipulated conditions of agreement between them are met

Directions are given for comparing antigens in the two tests officially used by the New York State Department of Health The text includes only such portions of these procedures as are needed for evaluation of antigens the article is not intended as a complete manual for serodiagnostic use

The principles of the complement fixation test have been discussed in numerous publications the details of technique here presented include simplifications and modifications adopted as a result of recent experience The antigen formula is cardiolipin 0.0175 / lecithin 0.0875 cholesterol 0.3 /

Two groups of sera defined as non reacting and high titre are selected in a one tube screening test with the standard antigen For each group conditions are stipulated for rejection and for tentative acceptance of an antigen component lot in question tests being made with the reference standard antigen in parallel by the respectively prescribed technique Observations with each group are made in a serial manner and a system of direct probability sequential analysis is applied to yield a decision to accept or to reject at the earliest opportunity according to the stipulated criteria These are based upon experience with the respective technique as indicators of satisfactory behaviour of antigens in subsequent use in corresponding serodiagnostic tests changes in technique or in tolerances of error might require corresponding changes in the criteria for decisions Detailed directions and tables are given to facilitate the application The fundamental ideas involved in direct probability sequential analysis are discussed briefly in an appendix

The antigen for the slide flocculation test has the formula cardiolipin 0.03 / lecithin 0.3 / cholesterol 0.9 / The test is performed on a paraffin ringed slide rotated and read promptly under a microscope Results are expressed as —  $\pm$  + 2+ 3+ or 4+ Photographs typical of these degrees of reaction are given as an aid in reading High titre sera are tested in serial dilution in salt solution the titre is defined as the highest dilution to give a 2+ reaction

Test and standard antigens are compared by simultaneous tests on each of 3 days with 10 non reacting 10 low titre and 10 high titre sera also with a single pool of high titre serum used in dilution No statistical method of evaluation has been devised for this test but conditions of agreement between two antigens based on experience with the technique are stipulated

to the present been carried out by the Division of Laboratories and Research New York State Department of Health (USA). Some members of this Division, placing their experience at the service of control laboratories and of those who desire to ensure the purity of the products they employ have published in the *World Health Organization Monograph Series* a study entitled *Cardiolipin antigens*. These authors one of whom is Dr Mary Pingborn the discoverer of cardiolipin describe in detail the methods and techniques which they apply to the control of cardiolipin and lecithin. The following summary gives the general principles of the methods used. Details concerning the various stages of the work can be obtained from the article itself.

The compounding of cardiolipin antigens requires preparation of pure cardiolipin and lecithin. Both substances may be prepared from beef heart however since egg lecithin is more easily purified than other lecithins its use in antigens is recommended.

Mincd beef heart is extracted successively with acetone and methanol and the methanol extract is precipitated with barium chloride. After separation of the barium precipitate lecithin may be precipitated from the filtrate with cadmium chloride.

The barium precipitate contains cardiolipin which is purified by a series of fractionations of the salts of sodium, barium and cadmium. The final product is a dehydrated ethanol solution of the sodium salt. The various steps which have been described in previous publications are here combined in a form which has been proved satisfactory in repeated use. It is emphasized however that other methods of purification may be equally satisfactory if they are shown to lead to the same final product.

Lecithin is best prepared by cadmium chloride precipitation of an ethanol extract of fresh egg yolks previously defatted with acetone. The precipitate is purified by (1) repeated precipitation of a chloroform solution with ethanol containing cadmium chloride (2) separation from 80% ethanol saturated with petroleum ether (3) removal of cadmium and treatment of the free lecithin with a 4:1 mixture of ether and acetone at 30-60°C to remove ether insoluble matter. The same general procedure may be used to purify lecithin from more complex sources such as beef heart but a greater number of steps is needed. In either case the final product is a dehydrated ethanol solution of free lecithin.

The final solutions are analysed for nitrogen, phosphorus, iodine number, dry weight of solute and in the case of lecithin for amino nitrogen. Details for the determination of phosphorus, iodine number and dry weight are given.

Serological as well as chemical tests are required to determine whether new lots of cardiolipin and lecithin compare satisfactorily with reference

and through the black rat established itself endemically during four centuries

Finally the author considers that these three varieties of *Pasteurella* (or *Yersinia*) *pestis* could be named var *orientalis antiqua* and *mediaevalis* respectively and he proposes that a systematic worldwide biochemical study of all plague strains be developed

## PLAGUE EPIDEMIOLOGY IN BOMBAY PROVINCE

A systematic study of the epidemiology of plague has been undertaken in Bombay Province India by Dr M Sharif formerly Assistant Director in charge of the Department of Entomology Haffkine Institute Bombay The author gives the plague endemic centres for the period 1930-45 in two divisions of this province and retraces the path of the epidemics and the course of their progress on the basis of data supplied by public health services The information obtained from this careful survey—presented in a suitable way on descriptive maps so that the date and duration of epidemics in each locality are clearly shown—makes it possible to a certain extent to forecast the advent of epidemic outbreaks in centres where they are frequent The survey is far from being of purely regional interest it suggests methods of work which could be applied with equal success to other countries where plague is endemic The original technique of the epidemiological surveys worked out by the author and illustrated by maps and the conclusions to which his investigation has led him have been published in the *Bulletin of the World Health Organization*<sup>1</sup>

The analysis of plague epidemics from 1930 to 1945 in two divisions of Bombay Province indicates that the infection emerges from the endemic centre located in the Western Ghats and that in the hills of Hyderabad State The district of Sholapur always imports plague from the Hyderabad State all the other districts from the endemic centre situated in the Western Ghats Bijapur and Ahmednagar districts however receive infection from both these endemic centres The districts of North Kanara Ratnagiri and Kolaba suffer little from plague on account of their location on the eastern sudden slopes and top of the Western Ghats The power of dissemination of plague from towns in these three districts is very slight probably owing to less grain traffic or to the excessive dampness of the area

In Bombay Province wild rodents do not play any part in the perpetuation and transmission of plague only domestic rats are involved During

## VARIETIES OF THE PLAGUE BACILLUS

The existence of various geographic strains of the plague bacillus distinguishable by their biochemical characteristics such as action on glycerine and nitrites has been demonstrated by several authors in the course of the past few years. One of these authors Dr R. Deignat, Directeur du Laboratoire médical de Costermansville, Belgian Congo, has just published in the *Bulletin of the World Health Organization* an article entitled 'Varietes de l'espece *Pasteurella pestis*'<sup>1</sup> in which he studies in particular the *P. pestis* strains of central Africa.

The author defines three varieties of *P. pestis*:

variety I (oriental) which does not ferment glycerine but produces nitrous acid

variety II (central Asiatic and central African) which ferments glycerine and produces nitrous acid

variety III (from south east Russia) which ferments glycerine and does not produce nitrous acid

After discussing the value of the various biochemical reactions enabling these varieties to be differentiated, the author emphasizes the similarity of the roles the latter play in plague transmission and immunology. He considers the possibility of permutations between the varieties but this still remains an open question.

The present geographical distribution of the three varieties is reviewed, together with their historical behaviour and their role in the origin and progress of the various epidemics recorded since antiquity.

Most study has been concentrated on variety I, the primary foci of which are found in India, Burma, and south China: this is the pathogenic agent of oriental plague which caused the 1894 pandemic. It is also responsible for the foci ofylvatic plague in California and South Africa, and of rural plague in South America.

Variety II—perhaps the oldest—came from central Asia (Transbaikalia, Mongolia and Manchuria) and moved west with the Aryan invasions; it was the cause of the plague among the Philistines. Later it appears to have followed the valley of the Nile into central Africa, leaving foci which still remain today. It is this variety also which, moving back towards the Mediterranean in the sixth century, is believed to have provoked the famous Justinian plague which spread throughout the Roman Empire. Since then, it seems to have disappeared from Europe and has remained isolated in Africa.

Variety III, which might be the result of a slow transformation of variety II, seems to have spread in the 14th century from the Caspian Sea throughout the whole of Europe where it caused the Black Death.

<sup>1</sup> Bull. W. H. O. 11, 1951, 4-47 (Article in French with summary in English and French).

by the onset of the rainy season which operates in two ways first it increases the rat population indoors secondly it lowers the temperature and raises the humidity which leads to an increase of the flea population and permits the fleas to leave the rat burrows and to attack human beings

The idea that plague is more a rural than an urban problem appears to be fallacious The disease may not break out severely in the commercial towns but still they play an important role in dispersing plague to villages where it flares up owing to the higher susceptibility of their rat populations

There are two types of plague epizootics In warm tablelands and plains the infection is often severe leading to a very heavy mortality among rats which results in the disappearance of the disease within a short time In the cooler regions comprising the watersheds of the Western Ghats plague infection is slow spreading and persists for a long time owing to lower rat mortality these areas which have moderately moist and cool climatic conditions throughout most of the year are considered to constitute an endemic plague centre

In the Indo Pakistan subcontinent seven endemic plague centres could be delimited Three of them are located in the submontane plains of the Himalayas Of the others three are found in watersheds of the mountain ranges of southern India and one in those of central India

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## *Reports from WHO Fellows*

Many of the letters and reports received from WHO Fellows are of such interest that they deserve to be read by a wider public They demonstrate more vividly than a series of facts and figures both the character of the fellowship programme and the response of the Fellows themselves Selections from these reports are therefore published from time to time but it must be emphasized that the opinions expressed are those of the Fellows

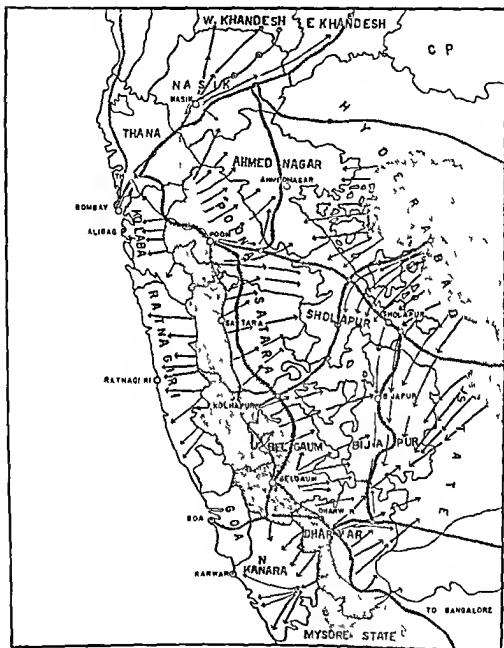
### **Dental Services in Scandinavia and England**

*Through a WHO fellowship Dr C L Sebelius Director Dental Hygiene Service Tennessee Department of Public Health Nashville Tenn USA has given an opportunity to observe dental health activities particularly those relative to children in Scandinavia and Great Britain Some of Dr Sebelius observations are summarized below*

#### *Norway*

The municipality of Oslo spends approximately 1% of its total tax money on a dental health programme for children School dental services which were initiated in 1910

FIG 3 PLAGUE ENDEMIC CENTRES AND SPREAD OF PLAGUE IN CENTRAL AND SOUTHERN DIVISIONS OF BOMBAY PROVINCE  
1930-45



The intensity of shading indicates the potency of the endemic areas and arrows indicate only the direction of radiation of plague but not the actual course of its progress

the off season the infection runs the course of a slow subterranean enzootic in some suitable places. The end of the hot and dry off season is marked

anatomy and dental technology is given to these people and at the end of the year the 100 students with the highest grades are admitted to the dental school for the regular four year course. This means that those who complete the training actually study for five years.

### *England*

Among the facts and figures concerning England's dental health services which Dr Sebelius found interesting was the statement that between 5 July 1948 and 31 March 1951 9 657 dentists participated in the national health service programme. These dentists saw 14 800 000 patients. Also interesting was the fact that 60 % of the money spent on dentistry under the National Health Service Act has been spent on dentures.

At the East Grinstead Maxillo Facial Unit where Dr Sebelius watched several operations a new type of bloodless surgery is being performed by means of lowering the patient's blood pressure. About 500 operations of this type have been performed.

Dr Sebelius found his study tour very worth while and in expressing his appreciation to WHO also expressed the hope that other public health dentists might be similarly privileged to travel and study.

## *Notes and News*

### **Dr H S Gear to Become Assistant Director General**

Dr H S Gear, Deputy Chief Health Officer for the Union of South Africa, will soon become Assistant Director General of WHO in charge of the Department of Central Technical Services, replacing Sir Sahub Singh Sokhey upon the latter's retirement.

Dr Gear was born in 1903 in the Transvaal Union of South Africa. He received his medical education at the University of Witwatersrand, Johannesburg, and his specialized training at the London School of Hygiene and Tropical Medicine.

He has held various important posts in South Africa and abroad. From 1932 to 1935 he was in charge of the Department of Preventive Medicine and Medical Statistics at the Henry Lester Institute, Shanghai. From 1935 until the present time he was on the staff of the Union Health Department, Union of South Africa, except for the period from 1940 to 1944 when he served as a senior medical officer with South African and British Armed Forces in East Africa and the Eastern Mediterranean Region.

Dr Gear has been very prominent in WHO work. He acted as delegate for his country at the International Health Conference in 1946 and at the First and Second Health Assemblies, and was appointed by the Union of South Africa to a seat on the Executive Board from 1948 to 1951. He served as Chairman of the Executive Board for a year and represented the Board at the Third and Fourth Assemblies. In addition he has participated in the meetings of several expert committees and technical groups.

Dr Sokhey, the retiring Assistant Director General, joined WHO in March 1950<sup>1</sup> after a long and distinguished career at the Haffkine Institute, Bombay.



take care of 97% of the schoolchildren free of charge. Greater Oslo now has a dental clinic in almost every school—about 50 in all. General dental services organized in 1938 care for children from 3 to 7 years of age and for young people between the ages of 14 and 18. For these services parents pay 5 kroner (\$0.70) per preschool child and 10 kroner (\$1.40) per young person (14-18 age group) per year. People in the 18-21 age group also receive government subsidized dental care through surplus sick insurance funds. Treatment is given by private practitioners and a percentage of the cost is paid by the sick insurance fund.

Dental programmes in other parts of Norway are subsidized by the government to the extent of 25% in rural areas and 12½% in urban centres.

Dental research and dental education are given considerable attention in Norway—e.g. since 1918 there has been a society for the preservation of teeth devoted to dental hygiene education and in March 1951 a new Norwegian Institute for Dental Research was opened in Oslo. Dentistry for children occupies an important place in the dental training curriculum.

### *Sweden*

Sweden's public dental service began in 1939. The State provides money for equipping clinics and subsidizes treatment on a per-child basis, grants being larger in rural areas than in cities. The school dental service in Stockholm comprises 50 clinics and is served by 90 dentists.

Sweden has a systematic programme for training dental nurses (dental hygienists) and dental technicians. The dental nurse receives four months or more of experience before entering school and then attends courses for six months. Before being granted a certificate she must spend nine months in a clinic or in a private office. There are three schools for training dental nurses according to this plan. The dental technician's training is also well organized. Following three and one half years' experience he goes to a training school for ten months and then "practices" for a year before being granted a diploma or licence. There are two schools for training dental technicians with about 24 students in each class under training.

At Vipeholm a research project has been under way since 1947 to study the relationship between nutrition and tooth diseases. Results are expected to be published soon.

### *Denmark*

In Denmark school dental services are considered among the most worthwhile social reforms of the country. Eighty-three of Denmark's 85 towns and 385 of her 1,300 parishes have school dental programmes. School dentists are public officers and private dentists are paid on a per-child basis. About 80% of schoolchildren now receive dental service in Copenhagen where there are 80,000 schoolchildren. 96% are cared for by the government service.

Every child who is born with a cleft palate or harelip has the defect recorded on his birth certificate and is subsequently given free treatment. A team consisting of a speech therapist, surgeon, eye, ear, nose and throat specialist and dentist decides on the needs of these children. Harelips are operated on when the children are two months of age, cleft palates at the age of two years. Approximately 150 new cases were seen last year and about 270 operations were performed.

Much of the dental work in Denmark is done under insurance plans in which the insurance companies pay approximately half the fees and the patients the rest.

Dr. Sebelius was impressed by the teaching facilities at the dental school in Copenhagen and by the method of selection of students. About 300 persons apply for admission to the school yearly. A one-year course in anatomy, physiology, chemistry, dental

## International Training Course in Health Statistics

In late June a six-day course was held in Geneva under the auspices of the WHO Special Office for Europe to give special training to statisticians from 14 countries in the use of the *Manual of the International Statistical Classification of Diseases Injuries and Causes of Death*<sup>1</sup> which constitutes the annex to WHO Regulations No 1. The *Manual* which is published by WHO in English, French and Spanish is designed to promote uniformity in reporting morbidity and mortality statistics throughout the world. Although it is the most effective tool devised to date for this purpose, there are many problems involved in its application. The training course was primarily intended for statisticians who encounter such problems in their daily work of classifying diagnostic statements on death certificates and medical records according to the *Manual*.

WHO Fellows from Austria, Belgium, Denmark, Finland, France, Ireland, Israel, Italy, the Netherlands, Norway, Sweden, Switzerland, the United Kingdom and Yugoslavia attended the course. Instruction was given by Dr P. Stocks, head of the WHO Centre for Classification of Diseases, General Register Office, Southport, England;<sup>2</sup> Dr B. G. Salomonson, Medical Officer, Central Bureau of Statistics, The Hague, Netherlands; Dr Marie Cakrtova, Chief of the WHO Section on the International Classification of Diseases and Causes of Death; and Mr L. Corbett, Technical Assistant, WHO Centre, Southport, England. The course consisted of lectures, practical exercises and discussions. It dealt with the structure of the Classification and its use, the meaning and application of the rules of classification, editing of certificates of cause of death and inquiries to medical certifiers for additional information. The course also included a comprehensive examination of supplementary interpretations and instructions which would ensure uniformity in dealing with specific problems arising in the application of the *Manual*.

## Medical Teaching Mission Sent to Israel and Iran

Fourteen specialists from six different countries have gone to Israel and Iran on a teaching mission sponsored jointly by WHO and the Unitarian Service Committee. With the aid of Mr H. L. Brooks, representative of the Unitarian Service Committee and administrative director of the mission, members of the WHO staff have prepared a curriculum which is designed to serve the general health interests of the countries visited and which includes subjects such as environmental sanitation, medical education, anaesthesia, physiology, epidemiology and public health in addition to basic medical and clinical sciences. The visiting team members are working directly with specialists in their respective fields—exchanging information, giving lectures and conferences and visiting hospitals, clinics, schools and other medical institutions. They have taken with them the necessary teaching materials including demonstration and laboratory equipment and surgical instruments.

Clinical and other specialists of the mission are spending one month in Israel, following which they will go to Iran for three weeks. The public health unit of the mission, directed by Dr K. Evang, is remaining in Israel for two months.

The roster of members of the teaching mission is as follows:

Dr L. M. Davidoff (Chairman of the mission), Clinical Professor of Neurosurgery, New York University Post Graduate Medical School, New York, N.Y., USA.  
Dr K. Evang, Surgeon General of Public Health, Oslo, Norway.

## New Assistant Director Named by PASB

Dr P C A Antunes has been appointed Assistant Director of the Pan American Sanitary Bureau (PASB) WHO Regional Office for the Americas. He succeeds Dr J R Murdock who has resigned to resume his post in the US Public Health Service. Dr Antunes' appointment follows three years of work in charge of the Bureau's public health programmes.

Dr Antunes was born and educated in São Paulo, Brazil. He obtained degrees in public health at Johns Hopkins University, Baltimore, Md., USA, and subsequently held important public health posts in Brazil. As medical officer in the National Yellow Fever Service, sponsored by the Rockefeller Foundation, he carried out field investigations on jungle yellow fever in both Brazil and Colombia. He also served in the malaria services of his country in which capacity he directed large scale malaria-control campaigns.

In 1945 Dr Antunes became Professor of Rural Health Practice and Parasitology at the School of Hygiene and Public Health in São Paulo. Two years later he was named Director of the São Paulo State Department of Health from which position he was released by his government to accept the post of Chief of the Division of Public Health with the PASB in 1949. On a recent visit to his native city, Dr Antunes was appointed Dean of the School of Hygiene and Public Health of the University of São Paulo, but he has been released by the University to continue his work with the PASB.

Dr Murdock, the resigning Assistant Director, served with the PASB for nearly 15 years during which time he saw the Bureau grow from an organization with an annual income of only \$115 000 and professional staff drawn largely from the US Public Health Service to one with an international staff and a budget of almost \$2 000 000. His work included programmes for eradication of yellow fever and plague in several South American republics, efforts to obtain treatment facilities for poliomyelitis patients in Chile and Colombia, and direction of the organization of malaria services in the Dominican Republic. He was instrumental in developing the existing close working relationship between the PASB and WHO, and in the past year was particularly concerned with the preparation of projects for implementation under the United Nations Technical Assistance Programme.

## International Research Centre for Chemical Microbiology Opened in Rome

In June 1951 the first International Research Centre for Chemical Microbiology was opened in Rome. Attached to the Istituto Superiore di Sanità—Italy's chief centre for medical research and drug control—this Centre for the study of mycology, chemical engineering and biochemistry will be directed by Professor E. B. Chain, F.R.S., London, co-discoverer of penicillin. Its facilities, which include pilot and full scale fermenters as well as modern extraction equipment, will be available to WHO Fellows—four of whom are now working at the Centre—for training and research in antibiotics.

To mark the inauguration of the Centre, a five day symposium—sponsored by the Istituto Superiore di Sanità, the Council for the Co-ordination of International Congresses of Medical Sciences and WHO—was held. The directors of several national research institutes, as well as other leading scientists from Belgium, France, Italy, the Netherlands, Sweden, the United Kingdom and the USA, attended this symposium, the subject of which was "Bacterial growth and its inhibition". Many world renowned experts on antibiotics contributed papers, the subjects covered including the mechanism of growth and the metabolism of micro-organisms, the development of resistance to the action of antibiotics, and the factors controlling penicillin fermentation. The symposium was a great success and the new knowledge acquired from it should do much to enrich the science of antibiotics.

Assistance Programme Fellowships have been granted by WHO and FAO for trainees from Burma Ceylon India Indonesia Malaya Portuguese India (Goa) Thailand and Viet Nam to attend the course which includes classroom lectures and practical laboratory work at the Institute and field experience in rural centres near Calcutta

Lt Col C K Lakshmanan Director of the All India Institute is acting as director of the training course he is assisted by Dr K Rajagopal and other members of the Institute staff Instructors include Dr K Mitra Assistant Director General of Public Health Government of India Dr V N Patwardhan Director of the Nutrition Research Institute Coonoor India Dr R C Burgess newly appointed Chief of the Nutrition Section at WHO Headquarters formerly with the Institute of Medical Research at Kuala Lumpur Malaya Miss J Ritchie of the FAO Bangkok office and Miss L Maramba of the Philippines

### Priority for Purchasing Chlorinated Hydrocarbons Granted to WHO

As a result of continued efforts on the part of WHO to meet the needs of Member States for DDT BHC and other chlorinated hydrocarbon insecticides which are in short supply the Organization has been granted priority for purchasing supplies of this insecticide from the USA The Director General of WHO has notified Member States that WHO is prepared to purchase these insecticides for them through a general export licence granted by the USA Priority will be given only to orders placed for delivery during the third and fourth quarters of the year however since US agricultural needs take up most of the production from January through June Member Governments are urged to arrange for their purchases in the US market to be shipped before the end of the year so as to obtain the best prices and avoid conflict with US domestic requirements

The US National Production Authority agreed that it is essential to world health to continue public health programmes against malaria and yellow fever which are dependent on DDT BHC and similar products The high priority ratings which have been granted to export orders of chlorinated hydrocarbon insecticides for public health and agricultural programmes—obtained largely through the efforts of the Pan American Sanitary Bureau WHO Regional Office for the Americas with the co-operation of the US Public Health Service—will make accessible approximately 15 million pounds of these essential commodities yearly

### Zoonoses Control

#### *Israel*

Acting upon FAO/WHO advice concerning brucellosis control\* the Israeli Government has undertaken an extensive vaccination programme of cattle utilizing Strain 19 vaccine This measure was considered necessary because of the programme of cattle importation which is under way in Israel

Approximately 15 000 dogs have been vaccinated with Flury vaccine in the WHO sponsored rabies-control programme in Israel\* Since inaugurating the vaccination campaign the number of cases of rabies has dropped precipitately and it is felt that a large measure of success in controlling this disease can be attributed to the vaccination programme Vaccination of dogs as they reach the age of 4-6 months is being continued The Israeli Government is now proceeding with a campaign to eliminate all stray and unvaccinated dogs Poisoning of jackals with strychnine will be the next step to be undertaken in the near future

Dr J E Gordon Professor of Preventive Medicine and Epidemiology Harvard University School of Public Health Boston Mass USA

Dr E Grzegorzewski Director of the Division of Education and Training Services World Health Organization Geneva Switzerland

Dr P Klempner Clinical Professor of Pathology Columbia University College of Physicians and Surgeons New York NY USA

Dr S Z Levine Professor of Pediatrics and Pediatrician in Chief New York Hospital Cornell Medical Center New York NY USA

Dr G K Moe Professor of Physiology State University of New York Medical Center at Syracuse University Syracuse NY USA

Dr L E Morris Assistant Professor of Anesthesiology State University of Iowa College of Medicine Iowa City Iowa USA

Dr H Osmond Clarke Honorary Surgeon and Assistant Director The Orthopaedic and Accident Hospital London United Kingdom

Dr L G Rigler Professor of Radiology University of Minnesota Medical School Minneapolis Minn USA

Dr C Semb Professor of Surgery University of Oslo Norway

Dr H Theorell Professor of Biochemistry Head of the Biochemical Department Medical Nobel Institute Stockholm Sweden

Professor R G Tyler Professor of Sanitary Engineering University of Washington Seattle Wash USA

Dr E Warburg Professor of Internal Medicine University of Copenhagen Copenhagen Denmark

Similar teaching missions to Colombia Finland Germany Greece Japan Poland and the Philippines have been sponsored by WHO and the Unitarian Service Committee which is a private voluntary organization devoted to humanitarian service on an international basis. The present mission however is the first of such size and scope and the first to go to the Eastern Mediterranean Region

## Campaign to Control Eye Diseases among Arab Refugees

Following surveys by WHO consultant Professor G B Bieth<sup>4</sup> efforts to combat eye diseases among the Arab refugees from Palestine are being renewed by the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWAPRNE). Dr P F Ferraris de Gaspare assistant to Professor Bieth has been engaged by UNRWAPRNE to undertake a six month control programme against conjunctivitis and trachoma which are extremely prevalent among the refugees—e.g. eye cases accounted for some 114 000 visits to UNRWAPRNE's 81 medical clinics in a single month.

Dr Ferraris de Gaspare has begun his work in the Jordan Valley and Gaza and will later go to camps in Lebanon and Syria. The project aims to reach as many sufferers from eye diseases as possible in the specified six month period and to organize ophthalmological services which can be continued by UNRWAPRNE and the relevant health authorities.

## Nutrition Course in South East Asia

A 3½ month course in nutrition was started on 3 September at the All India Institute of Hygiene and Public Health Calcutta under the sponsorship of the Government of India, FAO and WHO with funds provided through the United Nations Technical

# Views on WHO

## WHO and Venereal disease Control

In an article entitled *Perspectives in Venereology 1950* published in the *Bulletin of Hygiene* London (1951 26 101) R. R. Willcox calls attention to WHO's role in advancing venereal disease control.

"Perhaps the most significant contributions of the past year have been made by the World Health Organization. From the inception of WHO problems relating to malaria, tuberculosis, malnutrition and the venereal diseases have received priority. Much of the early work has been of necessity exploratory in nature but now, after less than three years of official existence, it can point to the successful operation of vast projects aimed at the treponemal diseases on a scale almost undreamed of only a few years ago. At the time of writing a huge mass treatment campaign employing procaine penicillin is attempting to eradicate yaws and syphilis from the island of Haiti; another proceeds apace in Indonesia; another in Bosnia-Herzegovina; while yet another which may ultimately lead to the reduction if not virtual extinction of *bejel* from the Euphrates and Tigris valleys has just commenced in Iraq. Others are planned. Certainly it is to WHO for the successful organization of these campaigns that the honours for the greatest advances of the year must fall."

## Medical Development in Africa

A recent editorial in *Medicine Illustrated* London (1951 5 396) expresses satisfaction

with WHO's plans to set up a Regional Organization for Africa.

The World Health Organization which has performed such striking work in the Near East, India, Far East and the Pacific has so far had but limited access to Africa. This is a pity as it is here that perhaps its most striking successes are capable of being achieved. True there have been a number of small scale investigations concerned with bilharzia, malnutrition and other subjects but all of those who cherish the idea of better health on an international scale will welcome the news from Geneva that Africa south of the Sahara is soon to be served by a WHO Regional Organization.

"Directors of health in territories which have in the past lacked the money for important medical projects may now feel that there is a considerable fund on which they now can draw and all who study African affairs will particularly welcome the acceptance by the Union of South Africa of the principle to establish a Regional Organization. Southern Rhodesia indeed has for some time been an associate member. From this auspicious beginning we may expect a great future for the health of the African. Even if no benefit was likely to accrue to the Africans themselves—which is quite impossible—with increasing facilities of transport we have in the fully-equipped African hospitals of the future a great potential training ground, a University of Field Experience for many young qualified European doctors. One day a house job in equatorial Africa may be regarded as an essential part of our medical education."

### *Europe*

Dr Wesley W Spink Professor of Medicine University of Minnesota Medical School Minneapolis Minn USA served as a WHO brucellosis consultant during the past summer. He visited FAO/WHO brucellosis centres in England France Italy and Yugoslavia as well as other brucellosis laboratories in Europe. During his visits Dr Spink assisted in brucellosis problems of importance in the various countries and also advised WHO on co ordination of research in future antibrucellosis activities.

### **PASB Undertakes Programme to Control Aftosa**

The Pan American Sanitary Bureau (PASB) WHO Regional Office for the Americas has announced the establishment in Brazil of a Pan American Aftosa Centre which will serve the whole American Continent. Aftosa commonly known as foot and mouth disease is an extremely contagious animal disease which afflicts cattle in more than 50 countries and causes great losses in meat and milk supplies. The new Centre will provide diagnostic facilities which are all important in the control of the disease and in addition will train workers and undertake research assignments. To date 16 of the 21 American republics have registered their approval and support of the Centre.

The project for aftosa control plans for which cover a five year period is being financed by the Organization of American States as part of its technical assistance programme. Brazil as host government is furnishing the land buildings local labour services and utilities. The installations will be located at São Bento about 15 miles from Rio de Janeiro where new buildings will be added to the laboratories already on the site assigned to the Centre.

Dr A Eichhorn formerly of the Bureau of Animal Industry US Department of Agriculture has been appointed Director of the Centre. Dr Eichhorn has had much experience in research on the control of animal and human diseases in both America and Europe.

### **UNICEF Office Facilities in London Made Available to WHO**

Announcement has been made of arrangements for WHO staff members to use the facilities of the UNICEF London office when the need arises. Secretarial aid booking of hotel reservations and other types of general assistance are available through Mr D Ward UNICEF London representative at the following address: c/o United Nations Information Centre, Russell Square House, Russell Square, London WC1.

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# CHRONICLE OF THE WORLD HEALTH ORGANIZATION

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Published on 30 October 1951

## PHARMACOPOEA INTERNATIONALIS

FIRST EDITION

Volume I

**T**HE *Pharmacopoea Internationalis*—the first international pharmacopoeia—volume I of which appears now in English and French and will shortly be available in Spanish also is a work of historic importance produced with a view to fulfilling the desire long felt by pharmacists and physicians throughout the world for the establishment of internationally recognized standards and nomenclature for pharmaceutical preparations in universal use.

The compilation of this work was begun in 1937 under the auspices of the League of Nations Health Organization but owing to the difficulties of wartime little progress was made until 1947 when the Interim Commission of the World Health Organization set up the WHO Expert Committee on the Unification of Pharmacopoeias. This committee has worked unceasingly since its establishment and in addition to the first volume has already prepared much of the material to be included in the second volume.

The *Pharmacopoea Internationalis* is similar in form to the present-day national pharmacopoeias. Volume I consists principally of 199 monographs giving specifications for various drugs and preparations including antitoxic sera and some of the newer antimalarials such as Proguanil Hydrochloride. There are 43 appendices giving particulars of the reagents and test solutions, solutions used for volumetric analysis, weights and measures, international atomic weights and usual and maximal doses for adults of drugs included in volume I and describing methods for assaying and determining the potency of certain of the substances mentioned in the monographs. The volume also contains general instructions and explanations of terms used and a note on patents and trademarks.

The *Pharmacopoea Internationalis* (Ph I) should be particularly useful to countries which have not yet developed a national pharmacopoeia as well as to those countries whose national pharmacopoeias need revision to bring them up to date. It is hoped that the health and pharmacopoeial authorities of the former countries will decide to adopt the book as a whole as their official pharmacopoeia. A supplement could be prepared by the country concerned so as to complete the Ph I according to national requirements. In such cases arrangements could be made for any of the editions to be supplied in large quantities at special low rates.

To all concerned with the prescribing and dispensing of pharmaceutical preparations the *Pharmacopoea Internationalis* will be of immense interest. Laying down as it does international standards for drugs this work will undoubtedly help to promote and protect the health of all peoples.

viii + 406 pages price 35/- \$5.00 Sn fr 20.—

Orders should be sent to the booksellers listed on the back cover or direct to World Health Organization Sales Section Palais des Nations Geneva Switzerland

## ECOSOC REVIEWS WORK OF WHO

The programme and budget of WHO are subject to yearly review by the Economic and Social Council (ECOSOC) for the General Assembly of the United Nations. This year in presenting to the 13th session of ECOSOC<sup>1</sup> the reports on WHO's work past and future<sup>2</sup> the Director-General explained the mechanism by which WHO's programme is evolved—a mechanism which has been developed to meet the varying needs of the regions served by WHO and which becomes increasingly important with the increasing interests and activities of the Organization. Excerpts from Dr Chisholm's statement follow.

Perhaps the most important field in which I could inform the Economic and Social Council would be in relation to the process of programme formation that goes on throughout the Organization. This process has evolved over a period of almost five years and has changed quite considerably during the last two years. It has changed particularly because of the developing structure of the Organization which now is reaching its regionalized structure and so is capable of developing programmes in ways that were not possible until just this last year.

"At the beginning of the work of the Organization programmes were determined almost entirely from Headquarters. The First World Health Assembly developed programmes concerned particularly with some six priorities but now the emphasis is changing. While these priorities are still of great importance and in many countries are still the true priorities for the work of the Organization in other countries they are of lesser consequence and have been replaced to a considerable extent by other concerns. In its present stage of development WHO programme planning is something like this. Programmes begin in various places—inside countries with the public health authorities of those countries in expert committees which advise the World Health Organization in other agencies of the United Nations and in non governmental agencies. Elements of the programme come from all these sources.

Staff members of the Organization together with a considerable number of temporary consultants obtained from many countries of the world frequently visit the countries which ask for assistance in developing their health work. An attempt is made to help the local authorities identify the weak points in their health administration and to determine the next steps to be taken in evolving their health programmes and developing their health organization. Next an attempt is made to understand how these

U. N. Doc. E/CONF.1/13 (1951) Off. Publ. of the United Nations, 1951, p. 235.  
C. L. D. Off. R. World Health Org. 30, p. 31.

## RECENT AND FORTHCOMING MEETINGS

### 1951

- |                            |  |
|----------------------------|--|
| 7 25 May                   | Fourth World Health Assembly Geneva  |
| 18 May                     | WHO Regional Committee for the Western Pacific first session Geneva  |
| 28 29 May                  | WHO Consultative Committee for Europe first session Geneva   |
| 1 18 June                  | WHO Executive Board eighth session Geneva  |
| 30 July-4 August           | WHO Expert Committee on Insecticides third session Savannah Ga   |
| 3 5 September              | WHO Consultative Committee for Europe second session Geneva  |
| 18 21 September            | WHO Expert Committee on Health Statistics Subcommittee on the Registration of Cases of Cancer as well as their Statistical Presentation second session Paris |
| 18 21 September            | WHO Regional Committee for the Western Pacific second session Manila   |
| 20-25 September            | WHO Regional Committee for South East Asia fourth session Rangoon  |
| 24 27 September            | WHO Regional Committee for Africa first session Geneva   |
| 15 20 October              | WHO Expert Committee on Environmental Sanitation second session Geneva   |
| 15 20 October              | WHO Expert Committee on Mental Health Alcoholism Subcommittee second session Copenhagen  |
| 15 20 October              | WHO Expert Committee on Nursing second session Geneva  |
| 22 October                 | European Seminar on Alcoholism Copenhagen  |
| 3 November                 |  |
| 29 October                 | WHO Expert Committee on the International Pharmacopoeia ninth session Geneva   |
| 3 November                 |  |
| 5 November                 | WHO Expert Committee on the International Pharmacopoeia Subcommittee on Non Proprietary Names third session Geneva   |
| 5 9 November               | WHO Expert Committee on Maternity Care first session Geneva  |
| 12 17 november             | Second Seminar for European Sanitary Engineers Rome  |
| 16 20 November             | WHO Expert Committee on Cholera first session New Delhi  |
| 21 29 November             | WHO Conference on Morbidity Statistics   |
|                            | WHO Expert Committee on Health Statistics third session Geneva   |
| 26 30 November             | WHO Expert Committee on Trachoma first session Alexandria  |
| 28 November                | WHO Expert Committee on Insecticides fourth session Geneva   |
| 4 December                 |  |
| 3 7 December               | WHO Expert Committee on Public Health Administration first session Geneva  |
| 3 8 December               | WHO Expert Committee on Biological Standardization fifth session Geneva  |
| 3 8 December               | Joint Expert Committee on the Physically Handicapped Child first session Geneva  |
| 17 18 December tentatively | WHO Consultant Group on Medical Aspects of Social Security Geneva  |

### 1952

- |              |  |
|--------------|--|
| 7 January    | WHO Executive Board Standing Committee on Administration and Finance Geneva    |
| 7 12 January | WHO Expert Committee on Drugs Liable to Produce Addiction third session Geneva |
| 22 January   | WHO Executive Board ninth session Geneva                                       |

the programme as it finds appropriate in order to fit those comments or recommendations. There is therefore a quite dynamic living programme developing system.

The constitutional responsibilities of the World Health Organization are well taken care of in this whole picture. All the other agencies which are working in the health field have recognized the overall responsibility of the World Health Organization for co-ordination in international health under the responsibility of the Economic and Social Council which in turn co-ordinates health with all the other activities of concern to the United Nations family. The bilateral technical assistance programmes are co-ordinated and surprisingly well with international health programmes. It is to be recognized that some of the elements in the motivation of the various organizations working in the field of health vary somewhat. In spite of the somewhat varying attitudes it has been found possible for the World Health Organization to fulfil its overall co-ordinating function in health work with the consent and very active co-operation of all other organizations working in that field.

At the beginning of its history—in its Interim Commission days—and later in its Assembly and Executive Board the World Health Organization found itself somewhat concerned about evidences of what it thought of as encroachment on the health field by a great variety of other organizations. There is no longer any such concern—it is quite evident that there is more health work to be done than can be done by all the agencies that have money available for that purpose. It has also become evident that through the mechanisms that have been established by the Economic and Social Council a degree of co-ordination has been obtained and can be maintained which will prevent damage being done to the orderly development of health services in countries. I do not mean that that is any easy thing to do—it may be very difficult and is difficult at times—but it can be done if the degree of co-operation which obtains at present continues into the future.

There is now thanks largely to the resolutions passed by the Economic and Social Council itself consultation at every level on programme planning at the present time the World Health Organization does not make any commitments in terms of programme in any of its activities without consultation with the appropriate bodies of the United Nations in order that they may signify their interest or their ability to take on part of the work or to supplement the work appropriately to their own particular interests.

There is in the World Health Organization a trend toward longer term planning. I have suggested to you the mechanism by which the Executive Board develops each year appropriate changes or shifts in emphasis in its long term planning over a four year period which it then recommends to the Assembly and which the Assembly revises as it wishes and finally adopts. Now the time is coming when the regional committees are beginning

requirements may be met. The facilities within the country and the resources available through the United Nations (including technical assistance) and through bilateral assistance are all canvassed to find where best can be obtained the types of assistance that each country needs in order to take the next appropriate steps for its own development. Consultations are held at each stage with other organizations, including those concerned with all types of bilateral technical assistance—the United States bilateral technical assistance programme the Colombo plan and others. Then the World Health Organization considers such facilities as may be provided within the general programme of work which has been approved by the World Health Assembly. All programmes are developed within the framework that has been determined by the Assembly this being based largely on the same considerations and indeed somewhat changed to fit the criteria, that have been established—and very usefully established—by the Economic and Social Council.

The programmes developed within each country with the assistance of technicians supplied by the World Health Organization are then taken to the regional committee meeting where a regional programme is developed in which local programmes are adjusted to fit the requirements of the whole region and in which certain elements of the programme are reduced because they can be taken care of by regional activity instead of strictly national activity. These [regional] programmes are sent in to Headquarters where the Secretariat puts them together into a world programme taking into account considerations that have been brought forward by the Economic and Social Council the General Assembly other specialized agencies and the expert committees of the World Health Organization. And so a programme is produced which is then sent to the Executive Board of the World Health Organization which considers this programme and transmits it, with comments and recommendations to the World Health Assembly. Finally the Assembly considers and adopts the programme for the succeeding year.

This relatively complicated way of developing programmes is in the interests of ensuring that the programmes really do fit the countries which are obtaining help from the World Health Organization. Programmes are not produced at Headquarters they evolve out of the felt and expressed needs of the countries themselves. There is opportunity to revise to adjust and to change the specific programme appropriately in relation to the attitude of a considerable number of bodies among them the Technical Assistance Board and the Technical Assistance Committee.

The World Health Assembly considers the programme that is brought to it with the comments and recommendations of the Executive Board in the light of its own four year programme and of the comments that have been made the previous year by the Economic and Social Council and by the General Assembly of the United Nations. It makes such changes in

of control and co ordination by the Executive Board and the World Health Assembly

The budget of WHO was criticized by several of the delegates some feeling that it was too ambitious others that more realism was desirable and still others that stabilization should be attempted The United States delegation called attention to the provisions of paragraph (f) of Article 50 of the WHO Constitution by which regional committees are empowered to recommend additional contributions by the governments of a particular region if the allotted proportion of the central budget of WHO proves insufficient for carrying out regional functions It was suggested that this procedure might aid in financing programmes of special interest to specific regions

Following the comments of the delegates and further clarification of several points by the Director General the report of WHO was noted with appreciation by the Economic and Social Council a resolution to this effect being adopted by 15 votes to none with 3 abstentions

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## TECHNICAL DISCUSSIONS ON THE EDUCATION AND TRAINING OF MEDICAL AND PUBLIC-HEALTH PERSONNEL

*An innovation of the Fourth World Health Assembly was the participation of the delegates in technical discussions on the Education and Training of Medical and Public Health Personnel a subject suggested by the Executive Board General satisfaction was expressed with regard to these discussions and similar ones will be a part of future assemblies*

*The discussions were based on extensive and valuable documentation submitted by Member Governments It is hoped to publish this documentation in summarized form in a forthcoming number of the Bulletin of the World Health Organization*

*Below appear four papers a report on the discussions by Dr R Sand Rapporteur of the general meetings at which Professeur J Parisot served as Chairman and the reports of the three working groups which discussed (1) undergraduate medical education (2) specialist training in public health and (3) training and utilization of auxiliary personnel in medical and health services*

### GENERAL REPORT

Dr RENÉ SAND

#### *Previous contributions*

The history of medical education is dominated by improvements in pedagogy which enrich its methods by progress in science and technology,

to develop longer term plans for the regions—again, within the framework of the long term plans provided by the Assembly and taking into consideration the real needs of the countries concerned

At this stage it is not possible for the World Health Organization to produce any very convincing evidence of the effectiveness of its work. Much of it will come to fruition in the future. It is easy to say that so many millions of people have been protected against malaria which is quite true, and it is easy to point out various things the World Health Organization has done but at this stage of development it is not possible to produce real evaluation of the social effects of the work of the Organization and what it is doing to the ability of countries to get on with their own development. We have plans for and we are developing evaluation procedures which, we hope, within the next three or four years will make it possible for us to report to the Economic and Social Council and to the World Health Assembly the results in convincing terms of the work of the Organization. But, in very many cases, the Organization is still at the level of laying groundwork of building foundations on which sound health development may take place and on which sound health services may be developed within countries. We are having to provide, in co-operation with other agencies—with UNICEF and UNESCO—and with the United Nations fellowships for training in the basic sciences related to health such as bacteriology, biochemistry and various subjects in which it is necessary to have technically trained competent people within the countries before it is sound to develop the institutions which can provide the foundation on which sound health organization can be built and on which sound health services may be provided to the people. It is not possible to do these things overnight. It is a matter of growth and training which in many cases may require years to become effective.

The World Health Organization does not make any attempt whatsoever to impose foreign patterns on any country but only to make available techniques that may have developed in other parts of the world and that are capable of that degree of adjustment to local conditions which will make them serviceable and useful to governments in their own efforts to improve their own conditions and get on with their own development."

General approval of WHO's work was expressed by various delegations at the ECOSOC meeting. Particular praise was accorded the adoption of the International Sanitary Regulations, the co-operation with other agencies and organizations, the successful campaigns against malaria and the activities relative to training of health personnel.

Some reservations were voiced concerning the Organization's emphasis on decentralization. The delegate from Iran urged that WHO should not forget that it was a world health organization and not a federation of organizations. The Belgian, French and United States delegations warned that excessive regionalization might lead to relinquishment of functions

concerned with the training of physicians nurses and health personnel of all kinds

### *Attempts at reform*

The situation has of course improved but the improvement has varied in degree from country to country and even from one school of medicine to another

The teaching of hygiene has on occasion become so penetrated with social considerations as to bring about the adoption of the title Chair of Hygiene and Social (or Preventive) Medicine or even of Chair of Social Medicine. Professors of medicine surgery obstetrics paediatrics and psychiatry have inaugurated medico social lectures. In a number of US universities the students go to observe a patient or a family at home and draft a medico social report which is discussed in a meeting of professors nurses social welfare workers and students. They undergo a period of practical training in health services or medico social organizations. In Norway this training is required in the probationary period following the course of studies. Chairs and institutes of industrial medicine have been created throughout the world. In Great Britain they are known as Chairs of Occupational Health just as Chairs of Paediatrics are known as Chairs of Child Health and students spend as much time with healthy children in clinics for infants and in school medical services as with sick children in the wards and the out patient departments.

In certain schools preventive social and industrial medicine form a continuous curriculum side by side with that of pathology and clinical medicine. Very early in his training the student learns to look upon the physician as the guardian of health and to consider disease as a collective phenomenon resulting from environmental influences. This teaching begins at the pre-clinical stage where the study of growth nutrition and fatigue introduces social considerations into physiology. The medical examination of students familiarizes them with preventive medicine. All this is done without overloading the syllabus. It is a psychosomatic social and humanistic orientation given to the studies rather than an addition to them contrasting with the mechanistic orientation born from discoveries in pathology.

### *Isolation and its effects*

On the whole however these first steps are still exceptional and the medical profession the hospital the medical school and the teachers themselves work in isolation.

Confined within the narrow limits of the individual practice of curative medicine too many practitioners are heedless of the public health experts and remain deaf to the voice of public opinion and of the authorities who are asking them to work more actively for the preservation of health.



which widens its scope, and by the needs of society, which dictate its curriculum. This threefold adaptation has become particularly important during the last quarter of a century. Government or academic authorities in most countries have appointed commissions to consider the revision of medical and allied studies. The British Medical Association has conducted investigations from the point of view of the medical profession; the Association générale des Étudiants en Médecine de Paris, from the point of view of university students; and the Association of American Medical Colleges, from the point of view of the teaching profession. The Royal College of Physicians, London; the International Council of Nurses and the national associations of nurses; the Rockefeller and Commonwealth Foundations, the World Medical Association and many other groups have tackled this subject, which eminent university teachers—from Abraham Flexner to Raymond B. Allen and Henry E. Sigerist—have studied thoroughly.

The Health Organization of the League of Nations considered the training of public health specialists as well as of physicians in its *Bulletin*<sup>1</sup>. Sir George Newman for Great Britain, C. Hamel J. Jadassohn, C. Prausnitz & M. Taute for Germany, G. Roussy for France, and E. Gorter for the Netherlands made a critical analysis of medical studies, accompanied by general surveys by J. Tandler and E. Burnet, which can still be read with profit.

At WHO, this subject has been dealt with by the Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel<sup>2</sup> and by the Expert Committee on Nursing<sup>3</sup>. Other expert committees have studied special aspects of medical training.

### *Goal to be reached*

To imbue the teaching with a new spirit engendered by the needs of the times and by social progress; to co-ordinate the stages, branches and methods of teaching; to harmonize the training of the various persons engaged in work for the protection of health; to extend the experience of the student from the laboratory and hospital ward to the out-patient department, the family home, the health service and the social agency; to teach him to take his place in a team consisting of nurses, social workers, sanitary engineers and statisticians; to give psychological, economic and social considerations, as well as constructive medicine, preventive medicine and restorative medicine their due place side by side with curative medicine—such are the recommendations expressed in various ways during the last 25 years by all those who, as individuals or groups, have been

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*Quart. Bull. Hlth Org.* 1934, 1, 7, 159, 315. 1935, 2, 483, 6, 0.  
*World Hlth Org. techn. Rep. Ser.* 1950, 22.  
*World Hlth Org. techn. Rep. Ser.* 1950, 24.

word teaching should open the door to life and deal with life preparing for the tasks of the physician nurse and health worker which are pre eminently human tasks Teaching should take man as its subject

FIG 1 TECHNICAL DISCUSSIONS



Left to right Professeur R Sand Rapporteur Professeur J Paillot Chairman

### *Work of the discussion groups*

The reports which follow give an impression of the discussions at the two plenary meetings and in the three study groups

Members taking part in the discussions noted a resolution of the Joint ILO/WHO Committee on Occupational Hygiene<sup>4</sup> Dr A Grut of the International Labour Office (ILO) also mentioned a resolution by the Committee of Experts on Indigenous Labour<sup>5</sup> recommending a study of the means by which members of indigenous communities can most effectively participate in programmes of medico social protection whether as doctors and nurses or as liaison and propaganda agents

### *Action by WHO*

The participants expressed their satisfaction with the methods employed by WHO and its regional offices to encourage professional training documentation convening of expert committees granting of fellowships organization of study courses and meetings and supplying publications and teaching materials Their unanimous desire is that these activities should be expanded

### *Nature of the technical discussions*

During the discussions governmental and non governmental delegates alike made important contributions A students delegate was heard to

Having no relationship with the secondary schools which send it students the medical faculty often lives within its own narrow circle, without organized contacts with the medical profession nurses, health services, and social organizations as one of the members of our group expressed it, the producers of medical science should come into closer contact with its 'consumers'

In addition, every professor tends to confine himself to his own subject and endeavours to add to its importance "Medical teaching is atomized" As one of our participants said, the student is given a number of keys to open as many special locks instead of being given a master key to open for him the entire domain of medicine A complete division is drawn between pre-clinical and clinical courses Psychological and social elements are neglected and attention concentrated on the somatic elements

The hospital too is generally isolated from the other institutions which provide medical care in the absence of a social service it is isolated from the homes from which its patients come and to which they return, and it is isolated from the medical profession and public health and district nurses from social services health departments and the social insurance organizations which now furnish most of its resources

### *Course to be pursued*

These various forms of isolation must give way to the establishment of close relationships co ordination and synthesis The training of the physician must be connected with that of nurses and all types of public health workers Even more the medical student the nurse the social worker and to a certain extent the public health expert the sanitary engineer and the statistician must form a team The ideal arrangement would be for them to be trained in different departments of the same school and to receive the same basic education An attempt must be made to define the conditions to be fulfilled by auxiliary workers, co operating with fully qualified staff

The hospital must take its place as an integral part of all health institutions It should cultivate both preventive and social medicine and should be closely connected with the medical faculty for the more effective discharge of its teaching functions

The faculty of medicine must seek the views and aid of the public health services social security organizations medico social agencies the medical profession and the students themselves It must ensure the co ordination or better still the unification of teaching

The secondary schools and the medical faculties should teach young people how to study observe think and reach decisions how to analyse and guide themselves, how to approach marriage and the rearing of children and how to carry out their professional and civic duties In a

## Group I

### UNDERGRADUATE MEDICAL EDUCATION

Four sessions of the group were held under the chairmanship of Sir Arcot Mudaliar (India) Professor O Andersen of Denmark acted as Rapporteur

At the opening session the group noted the studies made in many countries and by many institutions on the training of undergraduates In view of these studies it was agreed that discussion should be limited to a consideration of the broad principles that should be taken into account in a study of the adequacy of the present education of medical undergraduates to prepare them to meet the social as well as the technical problems of the practice of medicine including preventive medicine The decision was extended to cover the types of instruction including field experience which should be incorporated into the curriculum to ensure that medical graduates are adequately equipped to meet their sociological and technical responsibilities

It was recognized that the doctor must be capable of supervising the physical social and mental well being of the community with which he works To enable him to do this considerable modification of the education of the potential doctor is needed At the present time pre medical education in many schools and colleges places too much emphasis on physics and chemistry and too little attention is paid to subjects such as psychology anthropology and sociology This bias has been determined in part by the emphasis given to chemistry and physics in the medical curriculum and in part by the shortage of teachers of psychology anthropology and sociology

In the undergraduate stage it is desirable that the student should be introduced as early as possible in his medical training to the concepts of human ecology This can be achieved by including a short series of orientation lectures at the beginning of the medical course These lectures should be given by physicians public health workers social workers social anthropologists and others Opportunity should be taken during the training of the undergraduate medical student to point out the close relationship which should exist between the medical and the nursing care of the patient It was recognized that in view of their future team activity nurses and doctors should have planned opportunities to study together the total care of the patient

Attempts should be made to break down the barriers between pre clinical and clinical studies so that the two phases of training are completely integrated This can be achieved in at least two ways by including some contact between the student and clinical medicine in the pre-clinical course of training and starting hospital work in the first year and by conducting

express the wish that preventive and social medicine should be given their due importance already he stated Danish students are devoting themselves to social observations, of their own accord

Complete freedom of expression and a generous spirit of co operation and service characterized the discussions which are of interest to all countries, no matter what their stage of development

The delegates were both too numerous and too few to frame detailed conclusions, which would have called for recourse to a great number of authorities and for the preparation and analysis of documentary material covering all countries Only some twenty countries answered WHO's request for documentation Lastly and especially, so vast and thorough an investigation would have required months if not years

Such was not however the object of these debates in which organizers and participants in no way intended to disregard the competence of ministries of education ministries of health, and UNESCO The aim was simply to indicate in general terms what the training of the physician the nurse and other health workers should involve if they are to be in a position to give full protection to the health of the public adapting themselves to the needs of individual countries and to their human and material resources

### *Continuation of the discussions*

The participants desire that the documents summarizing their work should be communicated to the various governments and to the regional offices and that they should be widely circulated among those interested They anticipate from this a stimulation to new efforts, as well as fuller documentation the compilation and analysis of which might be undertaken by the Division of Education and Training Services For their part the Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel and the Expert Committee on Nursing should continue their investigations The Fifth World Health Assembly might profitably take up again the technical discussions begun at the Fourth Assembly and extend them to include the subject of protection of students health

The delegates unanimously expressed their gratitude to the directing officers and staff of WHO particularly to Professor E Grzegorzewski and his co workers for the facilities and assistance given them They also expressed appreciation to Professeur J Parisot who presided over the general sessions, to Sir Arcot Mudaliar Professor G W Anderson and Mrs Aung San who presided over the three groups and to Professor O Andersen Professor Z Shakhshiri and Dr R M Morris the Rapporteurs

universities there is a free exchange between clinical departments and public health schools of lecturers in psychology paediatrics and public health

It would be valuable to give the medical students three or four lectures stressing the duties and rights of doctors in case of war in conformity with the Geneva Conventions and the national legislation The lecturers and documentation may be obtained from the National Red Cross Society

Brief reference was made to the idea now being studied in a number of countries that a shortened course of training for doctors should be introduced This is being advanced as one way of meeting the great shortage of doctors in these countries In the opinion of the group this is a retrograde step and cannot be supported in principle One fully qualified doctor is better than twelve or more poorly trained doctors of a lower standard

In order that undergraduates may be properly trained it is essential that the universities and teaching hospitals be adequately staffed This refers to both the number of teachers and the quality of their training and experience Attention was drawn to the fact that a committee had been set up in the United Kingdom to study the training of the teacher in medical schools This report when published should make a useful contribution to knowledge on this subject In the opinion of the group WHO can help countries in the training of teachers by providing fellowships etc Help is particularly needed to train an adequate number of teachers in anatomy physiology pharmacy biochemistry and pathology There is a great shortage of these in the less well developed countries

In some underdeveloped areas the existing facilities are inadequate and need to be strengthened Many members of the present teaching staff require further higher training additional teaching staffs are needed and equipment is required WHO can assist in a number of ways A two way traffic between an established teaching institution and one requiring assistance by means of which the better established institute would provide teachers on exchange is one way of providing assistance The establishment of a central institute for training teachers would be another valuable contribution to the solution of this problem

A question was raised regarding the possibility of securing teachers for some countries in urgent need of them from the ranks of the medical persons who are to be found at present among the displaced persons The Medical Director of the International Refugee Organization (IRO) gave the necessary explanation pertaining to this programme

The selection of students to enter the medical profession and the number admitted for training each year were discussed at some length While agreement was reached that some method of selection was highly desirable it was not possible to define the techniques that should be used Reference was made to the need to take into consideration the following factors if an attempt is made to select men and women for training as doctors intelligence personality the degree of sympathy for one's fellow the capacity

tours to wards and homes of sick people as part of the study of pre-clinical subjects e.g., physiology, biochemistry

The teaching of mental health should be included in the pre-clinical course. Probably the most effective way to do this is in small discussion groups in which the student participates. These discussions enable him to express his own reactions to human problems and to change his opinion in relation to these problems without harm to himself.

In the clinical part of the training a student should be orientated towards disease as a community phenomenon, the result of the effects of the total environment on the individual. To do this, emphasis must be placed on preventive medicine and on social and mental factors in the etiology of disease. This can be achieved without increasing the length of the course by including a study of the mental and social factors in every case along with the somatic. The mental and social features of the history of every case can be gathered only from a study of the physical and cultural environment in which the patient lives and works, which involves visits to the homes of the patients. A number of universities and hospitals have already included a study of the social and mental factors of each case as routine procedure. For this work trained social workers are used. In some circumstances it seems that the student himself can participate in these home visits, working under the supervision of trained social workers or a physician interested in social medicine.

At the present time many clinical teachers are not adequately equipped to discuss the mental and social factors in the etiology and pathology of disease. This difficulty has been met in some hospitals by the formation of a team composed of a physician or surgeon and a medical social worker who may be a qualified physician.

Another way of introducing the medical student to the social aspects of health and disease is to arrange for a period of work in infant welfare clinics or school clinics. In some countries this association with social medical units is extended to internship after completion of the theoretical medical course, before the graduate receives his state licence.

Attention was drawn to the amount of time devoted to training in the various specialities during the undergraduate period. Often this training is at the expense of general medicine, surgery and obstetrics, and too frequently is at the postgraduate level. To some extent this imbalance in training can be corrected if the various specialities are considered as part of general medicine, surgery and obstetrics, and not treated as highly discreet subjects. Every endeavour should be made to break down the barriers between the main branches of clinical medicine and between these branches and the specialities.

It is important for each teacher to know what other teachers and lecturers contribute to the total medical curriculum. An exchange of teachers between clinical medicine and public health is often desirable. In some

The discussion at the Fourth World Health Assembly has provided a unique opportunity for an exchange of ideas and for the formulation of problems which are common to many countries. The group suggests that the Fourth World Health Assembly should give consideration to holding a discussion during the Fifth Health Assembly on further aspects of undergraduate medical education. In preparation for such a discussion it is desirable that the Member State initiate inquiries and studies on the problems that were discussed during the present meeting and on other problems related to this subject. The results of these studies should be made available to Member States in time for them to be studied adequately before discussion takes place at the Fifth Health Assembly.

## Group II

### SPECIALIST TRAINING IN PUBLIC HEALTH

Group II held four sessions under the chairmanship of Professor G. W. Anderson (United States of America). Professor Z. Shakhshiri (Lebanon) acted as Rapporteur.

The discussions of this group were directed at the problems of advanced training for the various professional personnel devoting their careers to organized public health work. During the course of the discussions many opinions were advanced but no attempt was made to obtain formal conclusions or recommendations from the group as a whole. The following represents merely a summary of ideas most commonly expressed particularly of those on which there seemed to be the least disagreement.

The problem of specialist training for public health work is that of providing postgraduate instruction for those with a variety of previous professional backgrounds. Among the many professions which contribute to the public health programme and form part of the public health team are physicians, nurses, engineers, dentists, veterinarians, statisticians, educators, various groups of laboratory personnel and in many countries social workers and midwives. It was agreed that each of these should before coming into public health practice have a sound basic professional background. It was clear from the discussions that existing basic medical and nursing education with its strong clinical emphasis and comparative lack of teaching in preventive and social aspects produces an outlook which may require considerable reorientation for those who proceed to postgraduate training in public health. At present therefore specialist training must begin by readjusting the lack of balance which exists in undergraduate professional education. Nevertheless even if the basic training of these professions were reorganized to give the understanding of preventive medicine which will be needed by every member of the medical and nursing professions, those who are to specialize in public health will



to develop an easy social approach etc. Some studies on this subject are in progress, but much more information is needed. The group suggested that WHO might draw the attention of governments to the need for each country to study this problem in terms of the conditions prevailing in the country.

The number of students admitted each year seems to be a major problem in most countries. A number of facts emerged during the discussion. Satisfactory teaching cannot be carried out if the number of students is greater than can be adequately handled by the number of teachers and the amount of equipment available. In general each faculty of medicine is the only group that can determine the number of students that can be satisfactorily taught with the personnel and equipment available. The number of students that are needed to meet the requirements of a country should be determined by those acquainted with the extent of the present and future health programmes. It was suggested that any group or committee considering this problem should include representatives of the practising doctors and of the faculty of medicine. If the number of doctors needed in any country is greater than the training facilities, then consideration should be given to providing additional training facilities rather than to overcrowding the existing ones.

In connexion with training of undergraduates the question was raised as to whether the training of postgraduates should take place in the same institutions. Most of the group were in favour of each medical school's being in possession of both kinds of training, i.e., facilities for training of both students and postgraduates. The importance of other non university hospitals and institutions with all facilities for education was stressed on this occasion.

The question of training of postgraduates emerged more and more from the discussion so that the Chairman had to draw the attention of the meeting to the fact that problems connected with the training of the general physician were to be discussed later on, probably at the next Assembly.

Another point which was emphasized in the discussion was that the curriculum must not be overcrowded but should concentrate on training the future physician in the knowledge of man.

The attention of the meeting was called to the health of the medical students. As this question however important was not included in the programme for discussion by this group the matter was referred to the Director General of WHO.

The group wishes to emphasize that in considering the problem of undergraduate education it is conscious of the fact that it has merely touched on a great number of very important problems many of which require considerable study. It is true that investigations into some of these are now in progress in a number of countries however additional studies are required.

have an opportunity to apply his theoretical knowledge to the solution of practical problems. This type of field training has been more extensively developed for public health nurses than for some of the other professional groups. The provision of refresher courses is equally necessary especially for those working outside the larger centres of population. Only through such courses can many of these workers keep abreast of new developments.

For the initial specialist training of public health workers emphasis should be placed on use of local facilities or if none are available on facilities in near by areas with comparable social economic and health situations. Unless such local facilities are utilized there is danger that the trainee will find difficulty in applying his theoretical knowledge to the problems of the community in which he will work. It was emphasized in this connexion that establishment of regional training centres is desirable inasmuch as many countries are not in a position to provide national training resources. On the other hand there are distinct advantages in providing foreign training for those who carry responsibility for direction and development of community wide health programmes. Thus in the selection of fellows for foreign study preference should be given to those who will be in a position to influence other persons either in administration or teaching. If fellowships are used for such persons greater benefit will accrue to the entire community. National authorities responsible for the choice of subjects in which fellowships should be awarded should recognize the great importance of choosing those fields which will have the most permanent effect upon the public health problems of that country. Notable among these are environmental sanitation and health education of the public as well as other fields of public health practice.

In the development of local training facilities visiting experts from other countries also have definite value. Such persons if not too closely bound to the practices of their own countries will provide added stimulus and new ideas and will at the same time carry back to their respective countries both an understanding of the problems of the areas they have visited and new ideas as to the solution of their own problems.

As part of a broad programme for refresher courses short term fellowships should be used to bring together professional workers from several countries for discussion seminars on a given public health problem and its possible solution. Such seminars provide a free exchange of ideas and a sharing of experiences from which may frequently evolve effective methods of dealing with such problems.

A national programme of training should embrace a proper balance between local facilities (including demonstration areas) fellowships for foreign study utilization of visiting experts and participation in national or international seminars. It cannot be too strongly emphasized that long range improvement of educational facilities depends upon proper planning and co ordination of all these methods.

still need additional postgraduate training. This postgraduate training will have to be obtained either prior to specialization in public health or after a short period of practical experience in a lower level public health position before the individual can proceed to positions of advanced responsibility.

It was recognized that one of the chief problems in public health training is recruitment of suitable personnel in adequate numbers. Although there are marked differences in this respect among the several professions, certain problems seem fairly common to all. Among these are the questions of remuneration, prestige and mental attitudes. So long as the private practice of the respective professions carries so much greater potential remuneration, which compensates the individual for the expense of training, there will be almost inevitable recruitment difficulties. To a high degree moreover, those who enter the professions from which public health workers are drawn are attracted by responsibilities towards individuals rather than towards the community as a whole. This means, for example, that in some countries recruitment of physicians for public health work is extremely difficult unless this work carries with it some opportunity for clinical contacts. It was recognized however that in many of these countries a complete separation of clinical and preventive duties is not possible and may not even be desirable, particularly at the community level, inasmuch as the opportunity to begin a programme of prevention may arise through the relationships created by the provision of medical care. Nevertheless in all circumstances a specialist in preventive medicine is needed at a high level to plan and administer the preventive component of health service.

The group examined the types of specialized training currently provided for each of the respective professions. Although there are distinct differences in several countries depending largely upon different practices in utilization of personnel and functions assigned to them, certain striking similarities were noted. Specialized training is provided to a high degree by universities either through a special instructional unit for public health or through facilities for advanced study in that part of the university which has given the undergraduate professional education. Another type of training is provided by special institutions not incorporated into an academic framework. Still a third is in service training provided by public health agencies for their existing or prospective staff. While there are advantages and reasons for each of these types of educational programme that associated with universities is apparently finding the greatest support as a means of specialist training. Regardless of which type of educational programme is utilized there are many advantages in training the several public health specialists together so that each may have an understanding of his relationship to the others and a strong sense of teamwork may thus be developed.

Whatever type of theoretical education is provided the training must also include a period of supervised field experience so that the trainee may

remain entirely in public employment so that their work can be controlled in such a way as not to conflict with that of registered doctors

There is much diversity in the duration of the training these auxiliaries receive in various areas the range being from six months to five years The requirements of basic education before training also vary the authorities in some areas being satisfied with four years of elementary education while others require eight years or more

## 2 *Auxiliaries who act as nursing assistants*

The training of nursing auxiliaries also shows wide variation the training being intended to permit them to perform two major functions—namely assisting the graduate nurse in hospitals or working on their own in isolated and rural areas There is a wide range in the types of training given in many instances it has no theoretical aspect The duration of the student period varies from three months to three years

In some areas nursing assistants carry out some of the diagnostic work done elsewhere by medical assistants It was emphasized that the exact nature of the work which these assistant nurses are allowed to do should be clearly defined and it was urged that provision be made to enable them after satisfactory service as assistants to go on to full qualification

## 3 *Auxiliaries who perform functions in connexion with midwifery*

In dealing with the problem of maternity and midwifery assistants many speakers stressed the problem of the hereditary midwife whose knowledge is derived from empirical practice They mentioned the steps taken in their countries to persuade these women to take short courses of training in the elements of asepsis and of modern midwifery practice

Training for midwifery auxiliaries varies from six months to two years with in most cases a subsequent period of work under supervision It was emphasized that wherever possible midwifery training should be preceded by a nursing assistant's course In some areas it is not yet possible to insist on any standard of general education before specialized training

All appreciated the value of maternity assistants who can either help the fully qualified midwife in maternity homes or work on their own in villages and rural areas Evidence was also given of the value of suitably trained maternity assistants in leading health education in backward countries and thus stimulating a demand from the people for further services in the field of preventive medicine

## 4 *Auxiliaries who act as assistants to or in place of sanitary engineers*

In this category the information provided showed marked diversity of aims In some areas candidates are selected who have had a fairly long

Finally, attention was directed briefly towards the content of the training programme. In addition to advanced studies in the appropriate professional specialities (still lacking in many countries) such programmes should embrace instruction in basic public health problems and practices and consideration of the economic and social milieu in which these problems are set. In very few training courses is sufficient attention given to the principles of administration, the application of mental hygiene to the problems of public health and proper understanding of the community and the family. It is essential that future training programmes should devote more attention to these fundamental considerations.

### Group III

#### TRAINING AND UTILIZATION OF AUXILIARY PERSONNEL IN MEDICAL AND HEALTH SERVICES

Group III held five meetings under the chairmanship of Mrs Aung San (Burma). The Rapporteur was Dr R. M. Morris (Southern Rhodesia).

After a general review of the conditions of training and use of non professional auxiliary personnel in various areas the group agreed to discuss the following categories:

- (1) those who perform some of the functions of registered doctors
- (2) those who act as nursing assistants
- (3) those who perform functions in connexion with midwifery
- (4) those who act as assistants to or in place of sanitary engineers
- (5) those who act as assistants to or in place of registered dentists
- (6) those who assist or function in some respects in place of fully qualified medical laboratory technicians
- (7) special categories of auxiliaries recruited and trained for specific purposes such as vaccination against smallpox, antimalarial duties, bilharziasis control, antitrypanosomiasis work and the control of various other diseases.

#### 1. *Auxiliaries who perform some of the functions of registered doctors*

It is apparent that in many parts of the world it is essential for the development of medical and health services to utilize persons other than registered doctors who have been trained in the diagnosis and treatment of the commoner diseases of the area in which they are to work. Their titles vary from medical assistant, "apothecary", "compounder", etc., to names which suggest that they are primarily nurses with training in diagnosis and methods of treatment. In discussing the utilization of such persons many speakers stressed the point that they should as far as possible

by carefully considered training schemes holds out good hopes that this principle may be extended still further

### *Conclusions*

The following conclusions would seem to represent the essence of the discussions in Group III

1 The employment of persons auxiliary to fully qualified professional workers in the major fields of medicine and public health is essential for the adequate development of health services in almost every part of the world today

2 The greatest need for such persons is in the economically and technically less developed areas but even in the more highly developed countries some of them must be regarded as having a permanent place in health schemes e.g. nursing assistants

3 Some categories of auxiliaries particularly assistants to registered doctors—by whatever title they are known—should be considered to be of the nature of temporary expedients. They should be replaced as soon as there are enough qualified professional persons to meet all needs

4 In selected categories careful consideration should be given to the desirability of providing means whereby the auxiliary can be promoted to a professional grade

5 In view of the great diversity of categories of auxiliary personnel which corresponds to the diversity of needs of various countries it is not at present feasible to set up internationally agreed minimum standards or regulations for training. But in the interests of the auxiliaries themselves and especially of their status in the community and of their opportunities for advancement it is important that each government set up a standard of qualification for each category employed. This standard should include reference to minimum basic education, length and content of the training syllabus and the nature of the qualifying examinations. Such standards should be frequently and regularly reviewed

6 Help can be given to local centres of instruction or training through the provision by WHO of teaching equipment such as films, film strips and guidance materials for teachers

7 As the information available on the training and use of auxiliaries is at present lacking in exact detail it is thought that further investigation and study could usefully be made by the World Health Organization. This might be done by inviting governments with experience in the subject to submit further details so that the basic materials for such a study may be collected and systematically reviewed

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elementary education. They are trained for three years with the intention that they should both provide and maintain the facilities necessary for elementary environmental sanitation. In other areas recruitment is largely for specialized purposes. Almost all speakers thought that assistants to sanitary engineers, especially those called upon to work on their own in rural areas, should have a training which will enable them to carry the elements of health education to the people they are serving. They should therefore be recruited from among the people they will serve to ensure that they have a full understanding of the local culture. The group thought that very great advances in health education can be made by careful recruitment and use of these auxiliaries as health educators, because they can demonstrate, in a practical way, the benefits of prophylactic medicine.

5 *Auxiliaries who act as assistants to, or in place of, registered dentists*

There was less discussion on this point and it did not seem that many members of the group had yet considered the problem. Mention was made of the possibility of giving dentists more time to deal with major dental problems by using assistants who have been trained to carry out the preliminary examinations. A higher grade of dental assistant who can do extractions and simple fillings can be provided by recruiting persons with a sufficiently high standard of education and giving them a course of theoretical and practical training of not less than two years.

6 *Auxiliaries who assist or function in some respects in place of, fully qualified medical laboratory technicians*

There was no doubt about the value of persons intensively trained in comparatively narrow fields of clinical microscopy, the content of the training depending on the commoner diseases of the area in which they are to be employed. The courses of training given at present vary from six to twelve months. These persons can be employed either in laboratories, where they can do the more simple parasitological examinations, or in rural areas where they can work in collaboration with doctors or medical assistants. It is not essential that their basic general education be very high. In some areas local needs may best be covered by training persons with dual qualifications as clinical microscopists and nursing assistants.

7 *Special categories of auxiliaries recruited and trained for specific purposes*

Included in this group are many categories of auxiliaries recruited and trained to deal with special local problems. Many speakers gave interesting and valuable information about specialized training which is often intended to make these auxiliaries competent to deal with one or more of the local endemic diseases in all its aspects. The success attained in several countries

permanent teeth attacked by caries. This rate of decay increases by one additional permanent tooth each year so that by the age of 14 the average child has 10 permanent teeth showing evidence of caries. After treatment however the average rate of tooth loss at the age of 14 is 0.5 and the average number of decayed teeth is 0.5 per child per year. Throughout his inquiry Dr. Fulton noted teeth showing amalgam fillings of exceptional merit. 82% of these were the work of dental nurses.

The author shows in tabular form the number of operations carried out and of children treated in the 19 clinics which he visited and gives details of the cost of this school dental service.

## Notes and News

### Study Tour of Public Health Officials

In October a group of public health officials from 16 European countries concluded a six week study tour arranged by WHO and directed by Professor A. Stampar, WHO consultant of Yugoslavia. This tour took the participants to Belgium, Scotland and Sweden, approximately two weeks being spent in each country. In Belgium particular attention was devoted to industrial health, new housing projects, medical services and mining research institutes in coal mining areas were inspected. In Scotland the results of the new nationalized health services were observed, visits being paid to both industrial and rural areas and even to isolated areas where the study group accompanied general practitioners on their rounds. In Sweden scattered populations and industrial communities were visited and the group was especially impressed by the development of hospital services.

The travelling study group included the following: Dr. A. E. de Wever, Belgium; Dr. P. Wingaard, Denmark; Dr. L. A. Kaprio, Finland; Dr. P. Bianquis, France; Dr. J. Koch, Germany; Dr. C. Jannopoulos, Greece; Dr. S. Sigurdson, Iceland; Dr. E. Traversa, Italy; Dr. H. J. Dukhuis, the Netherlands; Dr. T. O. Iversen, Norway; Dr. B. A. V. d. Pinho, Portugal; Dr. G. Clavero, d. l. Campo, Spain; Dr. B. K. G. Roos, Sweden; Dr. A. Sauter, Switzerland; Dr. R. J. Peters, United Kingdom; and Dr. R. I. Obracunc, Yugoslavia.

FIG. 2. STUDY TOUR



Dr. A. Stampar of Yugoslavia who led the group of public health officials on their study tour of Belgium, Scotland and Sweden.



# DENTAL CARE FOR SCHOOLCHILDREN

## An Interesting Experiment in New Zealand

During his stay in New Zealand as a WHO Fellow Dr John T Fulton Dental Services Adviser Children's Bureau Social Security Administration Washington D C USA studied one of the most interesting experiments in dental care of recent years. According to the system in force in New Zealand, nurses after a two year technical training course carry out a great part of the dental treatment given to schoolchildren in the school clinics. This system has given rise to worldwide controversy among dentists some of whom assert that the health of the children is endangered by delegating dental care to partially trained auxiliaries. On the other hand as others have pointed out no country has or is likely to have shortly a sufficient number of dentists so that the training of supplementary personnel is essential and fully justified.

Dr Fulton's study entitled *Experiment in dental care results of New Zealand's use of school dental nurses*, has just appeared in the WHO Monograph Series<sup>1</sup>.

School dental clinics in New Zealand are operated by dental nurses, employed and trained exclusively by the Department of Health. The training period covers two years a total of 1 608 hours. On completion of training the dental nurse is assigned to a school dental clinic. Under the general supervision of a dental officer she carries out examinations prophylaxis fillings extractions and gum treatments and also gives dental education to elementary schoolchildren. This service is moreover available to children below school age. In the fiscal year ending on 31 March 1949, an average of 715 children per nurse were cared for in the school dental clinics. On the average each child received 2.2 hours of service comprising 6.5 operations for that year. Such clinic service was available to 97% of all the elementary schools—both public and private—in New Zealand and 85% of the children in these schools were registered with the clinics.

To complete his study of the organization of this system, Dr Fulton investigated the incidence of dental caries among the schoolchildren as well as the results of treatment given. He came to the conclusion that New Zealand's national dental programme has achieved considerable success in combating dental caries among schoolchildren since a high proportion of decaying teeth have been saved by fillings and a low rate of tooth loss established. Dental caries is in fact very prevalent among New Zealand children. The average seven year old New Zealand schoolchild has two

<sup>1</sup> Fulton J T (1951) *Experiment in dental care results of New Zealand's use of school dental nurses*. Geneva (World Health Organization Monograph Series No 4) 87 pages price s/s \$1.00 or Sw fr 4.00

School continued to serve as leader of the teaching team which also included Dr G K Moe (physiology pharmacology) Dr E Warburg (internal medicine) Dr S Z Levine (paediatrics) Dr L G Rigler (radiology) and Dr L E Morris (anaesthesiology)

The medical teaching mission is only one type of aid which is being given to Iran by WHO Dr M A Maleki Health Minister of Iran and Sir Aly T Shousha Pasha

FIG 3 TEACHING MISSION



Dr L M Davidson (left) leader of the WHO/United Nations Service Committee Medical Teaching Mission is greeted upon the team's arrival in Iran by Dr A Kia (right) Undersecretary of State for the Iranian Ministry of Health

WHO Regional Director for the Eastern Mediterranean have signed agreements covering six health projects which will be undertaken in Iran under the joint sponsorship of the Iranian Government and the WHO technical assistance programme

### Malaria control Team Completes Assignment

The WHO/UNICEF malaria-control which worked for two years in the Jeypore Hills area of India<sup>2</sup> has completed its assignment The Orissa Government has taken over the malaria-control operations with UNICEF continuing to aid by supplying DDT

A final report on the team's activities reveals the following

- 1 A 15% to 20% reduction in the spleen rate was noted in the demonstration area a 30% reduction in the size of the spleen was observed
- 2 The general parasite rate decreased by about 50
- 3 In 1950 the monthly malaria morbidity rate was 18 to 20 per 1 000 persons at the close of the operations these figures had decreased to 1.5 to 3.74 per 1 000 persons
- 4 Entomological observations showed that DDT applied at a rate of 200 mg per square foot gave satisfactory vector control for at least ten months

Dr Stampar who directed a similar group under the auspices of the League of Nations some twenty years ago found that striking progress had been made in public health. Increasing emphasis is being laid on preventive medicine in medical training and in public health administration and increasing recognition is being given to the right of every human being to health.

This study tour the first scheme of its kind to be sponsored by WHO was of an experimental nature. Its aim was to provide opportunities for senior public health administrators to become acquainted with recent developments in public health and to exchange views on problems in countries with different economic social and health conditions. The success of the tour is expected to lead to similar study tours to other European countries in the next few years.

## Mental Health

### *Seminar on alcoholism*

The first European Seminar on Alcoholism was held from 22 October to 3 November 1951 in Copenhagen under the auspices of the Government of Denmark with the co-operation of the United Nations and WHO. Physicians psychologists social workers nurses and public health administrators from 11 countries met to hear lectures and to discuss the causes the treatment and the social and public health significance of alcoholism.

Dr E. M. Jellinek WHO consultant on alcoholism and Dr M. Schmidt of Copenhagen planned and directed the seminar. Other lecturers included Dr J. Matte Blanco of Chile Dr E. Jacobsen Mr V. Wedell Wedellborg and Professors E. Lundsgaard and E. Strömberg of Denmark Dr L. Hakkola of Finland Professeur L. E. Dérobert and Dr P. Fouquet of France Dr P. H. Esser of the Netherlands Dr O. Odegard of Norway Dr J. A. Højer and Professors S. Forssman L. Goldberg and G. Lundquist of Sweden Professeur M. Müller of Switzerland Dr H. Pullar Strecker of the United Kingdom Drs R. Fleming and J. Masserman of the USA Dr S. Butheim of Yugoslavia and Dr P. O. Wolff Chief Addiction producing Drugs Section WHO.

### *Consultants visit Egypt India Iraq Thailand and Yugoslavia*

Four mental health consultants have undertaken assignments for WHO. Dr C. H. Gundry Director of the Division of Mental Hygiene of the Metropolitan Health Committee Vancouver British Columbia has been sent to Thailand. Professor G. Kraus of Groningen University the Netherlands is on a four month visit to Egypt and Iran. Professor W. Meyer Gross Director of the Department of Clinical Research at Crichton Royal Hospital Dumfries United Kingdom is spending three months in India where he is advising the Indian Government on the setting up of a teaching centre at the Mysore State Mental Hospital. Dr P. V. Lemkau Associate Professor of Public Health Administration at Johns Hopkins University Baltimore Md. USA has completed a mission to Yugoslavia where he served as a consultant on mental hygiene.

## Teaching Mission in Iran

Having successfully concluded its assignment in Israel<sup>1</sup> the WHO/Unitarian Service Committee Medical Teaching Mission proceeded in October to Iran where members were received by the Shah of Iran H. M. Mohammed Reza Pahlavi. Dr L. M. Davidoff Clinical Professor of Neurosurgery at the New York University Post Graduate Medical

<sup>1</sup> *Ch on World Hlth Org* 1950 5 275



# CHRONICLE OF THE WORLD HEALTH ORGANIZATION

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FIG 4 MALARIA CONTROL TEAM



One of the spraying squads which worked with the WHO/UNICEF malaria control team in Orissa India is here shown weighing out ODT powder which is mixed with water and applied by the sprayers in the left foreground

### Training Course in Insect Control

Brazil is playing host to 20 Fellows from several countries of the Americas at a four month training course in insect control which opened 21 October at Rio de Janeiro. WHO is providing a number of fellowships through technical assistance funds for participants from Colombia, Haiti, Mexico and Venezuela. The Government of Brazil in addition to acting as host is paying for five fellowships.

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### CORRIGENDA

1951 Vol 5 No 3 (March) p 67

Line 8 *insert Israel after Iraq*

1951 Vol 5 No 7 8 (August) p 219

Line 1 *for American College of Chest Surgeons  
read American College of Chest Physicians*

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## REGIONAL ORGANIZATION FOR AFRICA

The last stage in the regionalization of WHO has been reached with the formation of a regional organization for Africa. Thus organizations have been established for the six regions demarcated by the First World Health Assembly: <sup>1</sup> the Eastern Mediterranean, South East Asia, the Americas, the Western Pacific, Europe <sup>2</sup> and now Africa.

The WHO Regional Organization for Africa formally came into being at the first session of the Regional Committee for Africa held in Geneva from 24 to 26 September 1951 and attended by representatives of all the countries constituting the Region. Dr J. N. Togba of Liberia was elected Chairman and *Médecin* Colonel G. Garcin of France Vice Chairman. Professor F. J. C. Cambournac of Portugal served as Rapporteur. The meeting was devoted largely to administrative and organizational questions including the selection of a site for the Regional Office and the nomination of a Regional Director.

Several places were proposed as possible sites for the Regional Office: Brazzaville (French Equatorial Africa), Kampala (Uganda), Monrovia (Liberia) and Santa Isabel (island of Fernando Po). Brazzaville was selected.

Dr F. Daubenton, who has held the post of Chief of the WHO Office for Africa since 1950, was named Regional Director, subject to approval by the Executive Board. Dr Daubenton has had considerable experience in public health and administration in South Africa, the Netherlands and Indonesia. He was formerly one of the consulting medical officers for the Witwatersrand Gold Mines Union of South Africa and Director General of the Medical Services of the Royal Netherlands Army. In 1948 he served as head of the WHO mission to Ethiopia; in 1949 he was consultant in public health administration for WHO in the Eastern Mediterranean Region, particularly in Libya and Eritrea.

In the course of the meetings of the Regional Committee, Dr Daubenton spoke of the tremendous health needs of the African continent. He expressed the hope that the establishment of a permanent Regional Office in Africa would, in co-operation with the governments concerned, facilitate giving adequate WHO assistance to the countries requesting it, and he outlined the help which had already been given in the past year—in sanitary engineering, public health administration, nutrition (in collaboration with FAO), control of malaria and bilharziasis, and the award of fellowships. General programmes for the Region for 1952 and 1953, which were drawn up by the Regional Committee, are to continue operations along these same

## RECENT AND FORTHCOMING MEETINGS

### 1951

- |                            |  |
|----------------------------|--|
| 7 25 May                   | Fourth World Health Assembly Geneva  |
| 18 May                     | WHO Regional Committee for the Western Pacific, first session Geneva   |
| 28 29 May                  | WHO Consultative Committee for Europe first session Geneva   |
| 1 18 June                  | WHO Executive Board eighth session Geneva  |
| 30 July-4 August           | WHO Expert Committee on Insecticides third session Savannah Ga   |
| 3 5 September              | WHO Consultative Committee for Europe second session Geneva  |
| 18 21 September            | WHO Expert Committee on Health Statistics Subcommittee on the Registration of Cases of Cancer as well as their Statistical Presentation second session Paris |
| 18 21 September            | WHO Regional Committee for the Western Pacific second session Manila   |
| 20-25 September            | WHO Regional Committee for South East Asia fourth session Rangoon  |
| 24 27 September            | WHO Regional Committee for Africa first session Geneva   |
| 15 20 October              | WHO Expert Committee on Environmental Sanitation second session Geneva   |
| 15 20 October              | WHO Expert Committee on Mental Health Alcoholism Subcommittee second session Copenhagen  |
| 15 20 October              | WHO Expert Committee on Nursing second session Geneva  |
| 22 October                 | European Seminar on Alcoholism Copenhagen  |
| 3 November                 |  |
| 29 October                 | WHO Expert Committee on the International Pharmacopoeia ninth session Geneva   |
| 3 November                 |  |
| 5 November                 | WHO Expert Committee on the International Pharmacopoeia Subcommittee on Non Proprietary Names third session Geneva   |
| 5 9 November               | WHO Expert Committee on Maternity Care first session Geneva  |
| 12 17 november             | Second Seminar for European Sanitary Engineers Rome  |
| 16-20 November             | WHO Expert Committee on Cholera first session New Delhi  |
| 21 29 November             | WHO Conference on Morbidity Statistics   |
|                            | WHO Expert Committee on Health Statistics third session Geneva   |
| 26-30 November             | WHO Expert Committee on Trachoma first session Alexandria  |
| 28 November                | WHO Expert Committee on Insecticides fourth session Geneva   |
| 4 December                 |  |
| 3 7 December               | WHO Expert Committee on Public Health Administration first session Geneva  |
| 3 8 December               | WHO Expert Committee on Biological Standardization fifth session Geneva  |
| 3 8 December               | Joint Expert Committee on the Physically Handicapped Child first session Geneva  |
| 17 18 December tentatively | WHO Consultant Group on Medical Aspects of Social Security Geneva  |

### 1952

- |              |  |
|--------------|--|
| 7 January    | WHO Executive Board Standing Committee on Administration and Finance Geneva    |
| 7 12 January | WHO Expert Committee on Drugs Liable to Produce Addiction third session Geneva |
| 22 January   | WHO Executive Board ninth session Geneva                                       |

In addition since numerous problems are common to several countries it is possible to organize—in the highly developed centres of a variety of host countries—symposia seminars or training courses from which all would benefit including some countries outside the European Region. It is intended to use a considerable portion of the funds available for fellowships for short term awards to participants in such courses or symposia.

### *Specific projects*

In addition to assisting national training institutes particularly public health schools by providing consultants and lecturers of international reputation and by supplying teaching materials the general programme of the Regional Organization for Europe includes a number of activities of a regional character involving many countries. For example in agreement with the Governments of Denmark Finland Norway and Sweden a three month course in tuberculosis control is being given in 1951 and will be repeated in the following years. Another joint effort is the establishment of a venereal disease demonstration project in the maritime and fluvial port of Rotterdam beginning in 1951. It is intended that this city should become a centre for the study of venereal disease-control problems of international importance. Courses will be instituted there with WHO assistance.

During 1952 it is planned to organize a seminar on zoonoses in connexion with the course in the laboratory diagnosis of rabies which is being considered for the Eastern Mediterranean Region. This seminar will be devoted to brucellosis Q fever and bovine tuberculosis. In 1953 a seminar along similar lines dealing with hydatidosis tularemia leptospirosis and meat hygiene might be organized in Spain or in Yugoslavia.

A demonstration and training centre for rural public health problems has been inaugurated at Soissons France and will provide training facilities in the future to participants from other European countries. This centre was organized by the French Government in co-operation with the International Children's Centre the Rockefeller Foundation UNICEF and WHO.

In 1953 it is planned to organize a seminar to discuss progress achieved and problems encountered in applying the new *Manual of the International Statistical Classification of Diseases Injuries and Causes of Death*. Comparison of experience gained in different countries will certainly be extremely valuable. Some countries in Europe are paying increasing attention to vital and health statistics organizing basic services for this purpose or concentrating on specialized fields such as hospital morbidity or cancer statistics. In 1951 a course was given in Geneva for coders responsible for applying at a national level the Sixth Revision of the International Lists of Diseases and Causes of Death.<sup>1</sup>



lines. Emphasis will be laid on the training of medical and auxiliary personnel, one of the major concerns in Africa.

The next meeting of the Regional Committee for Africa will be held in Monrovia, Liberia, in August 1952.

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## REGIONAL ORGANIZATION FOR EUROPE

The Regional Organization for Europe, which was to be established as soon as a majority of the countries concerned expressed their willingness, was constituted during the second session of the Consultative Committee for Europe, in accordance with the vote of representatives of 16 European countries who met in Geneva from 3 to 5 September 1951. Following this decision, the Consultative Committee became the WHO Regional Committee for Europe.

The Regional Office will be set up for the time being at WHO Headquarters in Geneva. Dr N. D. Begg was nominated Regional Director for Europe, subject to approval by the Executive Board. Dr Begg is a specialist in public health. He was Medical Superintendent of the Eastern Communicable Diseases Hospital, London, and later Chief Medical Officer for UNRRA in Poland. He headed the WHO mission in the latter country before being appointed Chief of the WHO Special Office for Europe on its establishment on 1 January 1949.

### Programme Studied

#### *General principles*

The Regional Committee examined the budget and programmes proposed for 1952 and 1953 which will be financed by WHO, UNICEF, and the programme of technical assistance for economic development. During the preceding session the Consultative Committee had laid down some guiding principles for the work of the Organization in Europe for the next four years. In the opinion of the committee, programmes in such a technically advanced region as Europe should aim less at demonstrating individual disease control methods than at assisting governments in co-ordinating existing health policies, exchanging experience on common health problems, and intensifying the training of all grades of public health personnel. WHO it is felt would best help governments to strengthen their national health services by these methods and would thus ensure the most fruitful results for technical assistance in Europe.

Chairman commented in his closing address. We have been able to plan more boldly than in previous years and this planning in common has helped us all to understand each other's difficulties and problems.

This year the Regional Director's report was discussed country by country and item by item. Among the points made were that the main

FIG 1 SOUTH EAST ASIA REGIONAL COMMITTEE — I



Dr. Svasit Dae, Chairman, addresses one of the sessions.  
Right: Dr. C. Mani, Regional Director.

criterion for giving international assistance should be the capacity of recipient countries to absorb the aid given and that local experts should co-operate more closely in detailed planning of internationally aided projects. Delegates expressed concern about the increasing difficulties in obtaining supplies of DDT and other products essential for health projects and criticism was voiced of the policies restricting the amounts of supplies and equipment which WHO can provide in addition to its advisory and demonstration services.

### Co-ordination of Programmes

The committee gave considerable attention to the pressing need for co-ordination of the health programmes now being launched in many countries of the Region with the assistance of different bodies such as ECA, the Colombo Plan and various United Nations specialized agencies. It was learned that co-ordinating committees working at the national level had already been formed in Burma, Indonesia and Thailand and that WHO

The anaesthesiology training centre in Copenhagen, inaugurated in May 1950<sup>2</sup> will continue its activities with the assistance of WHO. It is probable that after the 1953 course the University of Copenhagen will take over complete responsibility.

Other projects concern the annual seminar for European sanitary engineers,<sup>3</sup> the training of specialists in research on, and the production of antibiotics at the Istituto Superiore di Sanità, Rome,<sup>4</sup> the co-ordination of health services for seafarers which so far have been developed independently and sometimes along different lines in various countries, the rehabilitation of refugees whose health is impaired particularly those suffering from tuberculosis, the care of physically handicapped children, training courses or symposia and discussions on a variety of problems related to mental health such as the seminar on alcoholism in Copenhagen in 1951 and a seminar on the psychiatric problems of childhood which will take place in Oslo in 1952.

<sup>2</sup> *Ch on World Hlth Org* 1950 4 191

<sup>3</sup> *Ch on World Hlth Org* 1951 5 81

*Ch on World Hlth Org* 1951 5 74

## REGIONAL COMMITTEE FOR SOUTH-EAST ASIA

### Fourth Session

The fourth session of the WHO Regional Committee for South East Asia was held in Rangoon, Burma, from 20 to 25 September 1951. It was attended by delegations from Afghanistan, Burma, Ceylon, France (for French India), India, Indonesia, Portugal (for Portuguese India) and Thailand. Also present were observers from the Economic Commission for Asia and the Far East (ECAFE), UNICEF and FAO, and invitees from the Economic Co-operation Administration (ECA) and the Burmese Red Cross. The committee elected Dr Svasti Driengsang of Thailand, as Chairman and Dr A. L. de Sousa Sabinho of Portuguese India, as Vice Chairman.

At the opening session attended by more than 100 guests from government and other services in Rangoon, addresses of welcome were delivered by Daw Khin Kyi (Mrs Aung San), the retiring Chairman, and by U Khin Maung Lat, Minister for Social Services of the Union of Burma. The representative of the ECAFE conveyed to the meeting the good wishes of Mr Trygve Lie, Secretary General of the United Nations, and of Dr Loka Nathan, Executive Secretary of the ECAFE.

Noteworthy during the five day session was the freedom with which the viewpoints of different countries were presented and discussed. As the

While there was little scope for changes in the proposals for 1952 which had already been endorsed along general lines at the regional committee meeting of the previous year and which had been approved by the Fourth World Health Assembly there was considerable modification of the 1953 programme proposals. Suggested changes entailed additional expenditure for projects in Burma, Ceylon, French India and Thailand. The Regional Director stated that he hoped to be able to finance some of these additional projects from savings. For his guidance the committee established the following priorities: for Burma, a leprosy consultant and a second tuberculosis demonstration and training centre; for Ceylon, consultants in medical supplies and in medico-legal work; for French India, library books for the medical college; and for Thailand, a thoracic surgery unit. Secondary priorities were also established for other additional requests, including teaching equipment, fellowships, expert consultants and for Ceylon, a leprosy-control team.

Emphasis in the 1952 and 1953 programmes will continue to be placed on increased training facilities for health workers and on strengthening teaching institutions for auxiliary medical personnel, especially for nurses, midwives and sanitarians. As in 1951, a high priority will be given to the control of malaria, treponematoses and tuberculosis (including BCG vaccination campaigns) and to the promotion of nursing and maternal and child health activities, with particular emphasis on paediatrics. In addition to the continuation and expansion of existing activities in these fields, the following were approved: medical teaching missions for Burma and Ceylon; an environmental sanitation project for Thailand; advisory services in leprosy for Burma and Ceylon; and for India, assistance to the Indian Council of Medical Research in investigations on certain aspects of the epidemiology of plague and cholera, and expert advice on the critical problem of population control. Projects which aroused particular interest included those for joint WHO/UNICEF action to assist the Governments of India and Ceylon in establishing plants for the local production of DDT and to set up a penicillin production factory in India.

### Maternal and Child Health Centre

During the session an informal meeting of public health experts was held to discuss the syllabus of the enlarged maternal and child health centre to be opened next year in connexion with the All India Institute of Hygiene and Public Health in Calcutta. The new centre is estimated to cost \$2 000 000, the expense to be shared in approximately equal parts by the Government of India and UNICEF. Dr C. K. Lakshmanan, Director of the Institute, explained that the new centre will involve reorganization and expansion of an existing rural training field, the establishment of a new urban training field and construction of new hostel accommodations.

public health advisers working with the governments of Burma, Afghanistan and possibly Thailand would assist local health directorates in coping with the enormous amount of planning and co ordination which they had rather suddenly been asked to undertake

### Endorsement of Programmes

By far the most important part of the committee's work was the endorsement of the WHO programmes and budgets for the Region

FIG 2 SOUTH EAST ASIA REGIONAL COMMITTEE — II



The Programme Committee in session Left to right Mr A J Joseph Rapporteur Dr Maung Gale Chairman

involving an expenditure of \$1 900 000 for 1952 and of over \$2,000,000 for 1953 Detailed consideration was given to the proposals by a programme committee under the chairmanship of Dr Maung Gale, of Burma Mr A J Joseph of Ceylon served as Rapporteur

The proposals placed before the committee included WHO projects financed under United Nations technical assistance funds as well as those coming under WHO's regular budget In a majority of cases it was assumed that certain quantities of supplies and equipment essential for getting the programmes under way would be forthcoming from UNICEF or other sources These supplies amount to a little more than \$2 000 000

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for students. Allied sections of the Institute to be equipped under the expansion programme to serve the Department of Maternity and Child Health include those dealing with (1) biochemistry and nutrition, (2) sanitary engineering (for environmental sanitation), (3) public health administration (4) epidemiology, (5) statistics and (6) microbiology.

According to Dr Lakshmanan, the Indian Government has undertaken to continue the centre after an initial period of five years, as an integral part of the Institute, without further assistance from UNICEF. The Government will in addition provide instruction free of charge to 250 students from outside India, for a period of one academic year in each case, in return for the support given by UNICEF and as a matter of international co-operation. When in full operation the centre is expected to train 60 students per year.

It was recommended that the syllabus of the new centre include (1) a postgraduate course in maternal and child health for doctors, (2) a public health nursing course for certified nurses and (3) a short term course for junior health workers. The centre will also provide facilities for holding seminars, demonstrations and public discussions on child health and related problems for professional medical teaching staffs and hospital staffs.

### Other Decisions

Reviewing the fellowships programme of WHO the committee was in general agreement that, in spite of certain defects pointed out by the Regional Director, fellowships offered a valuable means of strengthening national health services when there were not adequate facilities for advanced training in public health within each country.

Trachoma control was discussed, but the committee decided to await the results of certain experiments now being carried out on the efficacy of aureomycin ointment before endorsing concrete proposals for control projects.

Recognizing that environmental sanitation conditions in and around ports and airports should be improved in order to prevent the spread of quarantinable diseases, the committee recommended that all governments take urgent steps in port areas to prevent the breeding of rodents and insect vectors of disease to ensure proper disposal of human waste and to provide pure water supplies and facilities for vaccination against communicable diseases.

When discussing long term planning the committee decided to continue its present, so-called short term programmes for the next few years. The necessity for first providing the basic health services around which various other health programmes might be developed was stressed. The establishment of at least one model rural health centre in each country was considered essential for demonstration purposes and for the training

of the required personnel. The need for making every country self sufficient in vaccines and sera was recognized.

The Regional Committee for South East Asia accepted the invitation of the Indonesian Government to hold next year's meeting in Indonesia.

## REGIONAL COMMITTEE FOR THE WESTERN PACIFIC

### First Session

The establishment of a WHO regional organization for the Western Pacific was proposed at and approved by the Third World Health Assembly<sup>1</sup>. A temporary office for this region was subsequently set up in Hong Kong and it was planned to hold the first meeting of a regional committee there in March 1951. Political developments in the area led the Executive Board at its seventh session<sup>2</sup> to postpone the meeting. However the Fourth Health Assembly acting on a request from the delegations of Cambodia, Korea, Laos, the Philippines and Viet Nam terminated the postponement and decided that the first session of the Regional Committee for the Western Pacific should be convened in Geneva in May 1951<sup>3</sup>. This first session was devoted principally to administrative and legal matters. The date for a second session was set and the groundwork was laid for the establishment of a regional office and organization. The next step was the appointment of Dr I. C. Fang as Regional Director for the Western Pacific and the designation of Manila, the Philippines, as the site of the Regional Office<sup>4</sup>.

### Second Session

The second session of the Regional Committee for the Western Pacific opened in Manila on 18 September 1951. Present were the Vice President and Cabinet Secretaries of the Republic of the Philippines as well as representatives of Australia, Cambodia, China, France, Japan, Korea, Laos, the Netherlands, the Philippines, the United Kingdom, the USA and Viet Nam. Delegates from Australia and the USA attended as observers only. New Zealand and Portugal were not represented.

Following addresses of welcome the committee under the chairmanship of Dr R. G. Padua, Under Secretary of Health for the Philippines, elected two Rapporteurs, Dr K. C. Yeo of the United Kingdom and Dr Son Mam, Minister of Health of Cambodia. Dr Phan Huy Dan, Chief Delegate for Viet Nam, served as Vice Chairman.



### *Problem of supplies*

The question of supplies—one which engaged much of the attention of the committee and the urgency of which was reflected in discussions during meetings held in the same month by committees of other regions—was introduced early in the session when delegates from Laos, the Philippines and Viet Nam asked that modification of future programmes be considered to allow for the provision of supplies for health programmes in addition to specialists requested from WHO. It was stated that in many countries in the Western Pacific Region most of which are economically under developed, governments find it extremely difficult, if not impossible, to supply equipment for internationally assisted health projects. Dr Fung, pointing out that WHO is not a supply agency and that other organizations have been created for this purpose emphasized that in view of WHO's small budget the provision of supplies was not possible. However, the discussions gave rise to two resolutions which were presented to and passed by, the committee.

1 The Regional Director was requested to consult the UNICEF Regional Office for Asia with a view to joint consideration of the nature and extent of aid which might be given, in combined medical programmes to Cambodia, Laos and Viet Nam due attention being paid to the current social and economic conditions as well as to the medical needs of these three countries.

2 WHO was requested to take steps to provide more material assistance in the form of essential equipment and supplies for medical and public health projects so that many of the Member States of the Western Pacific Region might receive practical aid and deal with their medical and public health problems more quickly and effectively.

### *Plans approved*

With minor modifications the proposed programme and budget of the Western Pacific Region for 1953 was approved. These plans include assistance to Brunei, Cambodia, China (Taiwan), Hong Kong, Japan, Korea, Laos, Malaya, New Zealand, North Borneo, the Philippines, Sarawak, Singapore and Viet Nam together with services to countries as yet undesignated.

The committee discussed ways and means of avoiding the confusion which sometimes results from having a number of international organizations interested in health work. A resolution was passed recommending that all Member States establish single points of contact for effective liaison in matters of international health.

After approving the Regional Director's report the committee adopted resolutions for (1) taking urgent steps to improve sanitary conditions in and around ports and airports (2) developing a five year health pro

gramme (3) studying the report of the Joint FAO/WHO Expert Committee on Nutrition <sup>3</sup> (4) assisting Member States in drawing up short and long term national health programmes (5) recognizing the need for an informed public opinion especially in underdeveloped countries with regard to the fundamental principles of self care and child care as well as the need for persons trained in child care (6) ensuring the regional supply of insecticides essential for carrying out long term malaria and insect control projects (7) furthering public information activities within the Region (8) furnishing by all Member States of uniform national health reports for inclusion in WHO records and (9) maintaining the continuity of delegates to the World Health Assembly and the Regional Committee

### Future Meetings

The holding of two seminars was announced the first on nursing to take place in 1952 the second on mental health to be held in 1953 The delegate of China proposed Taipeh Taiwan for the nursing seminar and the delegate of Australia offered Sydney University as the meeting place for the mental health seminar Both offers were accepted

The third session of the Regional Committee for the Western Pacific will take place in Saigon in September 1952 Technical discussions will be held in conjunction with this session the subject chosen being Regional aspects of the education and training of public health personnel

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## THE COST OF SICKNESS AND THE PRICE OF HEALTH

A study entitled The cost of sickness and the price of health prepared by Professor C E A Winslow as a basis for the technical discussion on the economic value of preventive medicine which is to take place during the Fifth World Health Assembly has just been published as No 7 in the Monograph Series of the World Health Organization <sup>1</sup>

### Cost of Sickness

The relatively small investment involved in a sound public health programme is compared with the cost to the community of a low life expectancy rate and a high morbidity rate The economic burden of premature death and of physical and mental disability with the loss of

productive power and expenditure of large sums on the care and treatment of the sick which they involve is shown by illustration to exceed that of preventive health measures. In the period immediately preceding the second World War, in Germany, where male life expectancy was 60 years, the average income per capita was \$520, in Mexico, where male life expectancy was 37 years, the average income per capita was only \$61. A Swedish economist has demonstrated that illness costs Sweden the equivalent of \$50 per capita per year. In Egypt, bilharziasis alone decreases the production of the country by 33%. Malaria causes a loss of man power of 10% 15% of the total labour force of Southern Rhodesia. It has been estimated that the annual cost of temporary and permanent disability in the USA is between \$3,000,000 000 and \$4,000,000 000 (between 1% and 2% of the national income).

With the application of present day scientific knowledge, disease can be prevented and controlled to an extent hitherto unforeseen. Improved environmental sanitation has led to a reduction in the incidence of intestinal diseases such as typhoid fever, and mosquito borne diseases, such as yellow fever and malaria. Data from campaigns on all continents of the world illustrate the successes which have been achieved by control programmes, and the comparatively low cost to the community of planned control activities as compared with that of the unchecked spread of disease. Before a recent sanitation programme carried out on the Amazonian watersheds of Peru 99% of the schoolchildren in the area were infected with intestinal parasites. Four years later the percentage infected had fallen to 58%. In Greece, the incidence of malaria was reduced from at least 2 000 000 cases in 1942 to only 50 000 cases in 1949. It is estimated that 30 000 000-60 000 000 man work days a year have been saved as a result. Achievements in the control of contact borne diseases such as tuberculosis and the treponemal diseases while less spectacular may be almost equally effective. The joint WHO/UNICEF antiyaws campaign at present in operation in Haiti has already resulted. It is estimated in the return to work of 100 000 incapacitated persons with a consequent increase in national production of \$5 000 000 a year.

It is not however sufficient to protect the community against specific communicable diseases. General health and well being must also be promoted. Special categories of the community such as mothers and children must be specially cared for. Adequate nutrition the relation of which to productive capacity has been revealed by many studies must be provided. Atmospheric temperature housing conditions and conditions in industry which also affect the health and efficiency of the individual equally require supervision. Mental and nervous diseases constitute a grave economic burden especially to industry, and mental hygiene which also forms an approach to the grave problems of alcoholism and drug addiction, merits an important place in the health programme.

## Cost of Health

While the diversity of pattern to be met with in national health services—differences in degree of autonomy within the national governmental organization in the services covered and in relations with local health services—is recognized as inevitable some indication is given of the cost of planning any national health service and of the needs it should meet

The national health service should so plan activities that expenditure is concentrated to maximum advantage It should afford inspiration and leadership to the local health services and provide specialized technical assistance at the local level Each local area should be provided with public health personnel adequate for its needs The all important members of the public health team—the administrator the engineer and the nurse—need the assistance of other specialists such as the veterinarian and the dentist and of chief importance the health educator the essential link between the health team and the general public The almost universal shortage of personnel can be countered only by the provision of more training facilities and of better organized recruitment Institutional facilities such as hospitals and clinics which are also inadequate in many areas must be used to the best advantage

While the cost of public health programmes will obviously differ according to the differing needs of nations and to the balance maintained between expenditure on curative and on preventive health services respectively some idea of an ideal programme may be obtained from a study of existing programmes It has been estimated that in the more prosperous areas of the world a purely preventive programme can be financed at a cost of about 0.5% of the national income while curative medicine requires an expenditure ten times as great In Great Britain for the year 1949/50 expenditure on the all inclusive National Health Service was more than six times as great as the expenditure on purely preventive services WHO could contribute to the development of sound and economically possible programmes by collecting and analysing data on the general patterns of existing national health services on administrative organization in local areas on numbers and future needs of public health personnel and on the cost of both actual and conjectural health programmes

## Relation of Health to Social and Economic Development Technical Assistance

The poverty resultant upon disease has been amply illustrated Data from even highly prosperous countries show that conversely poverty is an important causative factor of disease Some theorists believe that drastic limitations on population offer the "only possible solution" to the problem of poverty but improved health and the economic develop-

ment consequent upon it is a more humane and less controversial solution. As the standard of health in a community is intimately related to the economic and social conditions prevailing therein, health programmes cannot be planned independently but must be integrated with programmes for economic and social improvement. The success of such programmes leads to the added prosperity which in turn leads to improved health.

The expenditure involved in economic and social improvement is too great to be supported unaided by the underdeveloped countries. Realization of this fact has led to the formulation of a worldwide programme of co-operative assistance, a programme which to the historian of the future, may well seem 'one of the most brilliant and outstanding contributions of the 20th century to world history'.

The Pan American Sanitary Bureau, the Rockefeller Foundation and the League of Nations among others were pioneers in the provision of measures of technical assistance to various regions of the world but with the development of the United Nations expanded programme of technical assistance for the economic development of underdeveloped countries, the technical assistance programme has been placed on a formal international footing. The health administrator and WHO as the co-ordinating authority on international health work have a major part to play in solving the administrative and other problems of technical assistance and in realizing its great potentialities. Technical assistance is not a relief project for feeding starving millions, nor is it a vision of a new world which would reorganize national economy overnight and impose upon primitive peoples an alien way of life. It is a direct simple practical procedure for providing the leadership of trained technical personnel to assist underprivileged peoples in improving their own standard of living in their own way with major possibilities of improvement in total world economy as a result. In such a programme as this is to be found the basis for the future health of the world.

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## MALARIA IN EQUATORIAL AFRICA

In a previous number of the *Chronicle*<sup>1</sup> mention has been made of the Malaria Conference in Equatorial Africa which was held at Kampala, Uganda, in November and December 1950 and the report on which was published as No. 38 in the *World Health Organization Technical Report Series*. The discussions at this conference and the conclusions it reached were based on a number of studies carried out in different parts of Africa.

A selection of the papers presented has recently been published in a number of the *Bulletin of the World Health Organization* <sup>2</sup>

In this series of articles various aspects of the problem of malaria in Africa are considered. Dr Leonard J. Bruce Chwatt of the Malaria Service Medical Department Nigeria has summarized data obtained from various surveys of malaria mortality rates, incidence and distribution in Nigeria. The malaria survey of South West Africa was undertaken by Dr Botha De Meillon, entomologist at the South African Institute for Medical Research, Johannesburg, at the invitation of the Administration of South West Africa.

In another important study Dr De Meillon enumerates the species and varieties of malaria vectors in Africa and describes their geographical distribution and bionomics. M. H. Holstein, Chef du Laboratoire d'Entomologie, Service général d'Hygiène mobile et de Prophylaxie de l'Afrique Occidentale Française, discusses the anophelids of French West Africa and reviews the epidemiology of malaria there. A campaign to eliminate the disease in Mauritius is described by Dr M. A. C. Dowling, Officer in Charge of the Malaria Eradication Scheme at Port Louis, Mauritius. Finally a short paper by Mr G. Davidson of Colonial Insecticide Research, Taveta, Kenya, reports the results of the use of DDT and BHC in malaria control at Taveta.

These articles are briefly summarized below.

### *Malaria in Nigeria* <sup>3</sup>

Surveys over the past 20 years have revealed that the whole of Nigeria is malarious, while several regions are hyperendemic. The malaria transmission period varies from less than 5 months a year in the Sudan and Sahel savannah regions to almost 12 months of the year in the coastal belt. While eight species of anopheline vectors have been found, *Anopheles funestus* and the *A. gambiae* group are the most important. *A. gambiae gambiae*, which breeds relatively indiscriminately, is found throughout Nigeria, while *A. funestus* is found only near clean, more or less shaded water. The seasonal prevalence of the two vectors varies considerably; nevertheless, it may be said that while *A. gambiae gambiae* is the wet season vector, *A. funestus* becomes the chief vector during the first half of the dry season.

Malaria morbidity and mortality data are presented separately for the small non-African population on the one hand, and the very large indigenous population on the other. The total number of malaria cases among the indigenous population has increased from 84,401 in 1944 to 123,265 in 1948, while the case fatality rate per 1,000 cases has increased from 1.56 to 1.95 over the same period. These figures cannot, however, be considered

absolutely reliable, as annual returns are based solely on attendance figures at the 75 government and native administration hospitals exclusive of attendance figures at the 526 native administration dispensaries, and, even in the hospitals, malaria diagnosis is often based purely upon an individual interpretation of clinical symptoms without confirmation by laboratory examination

No country wide antimalaria programmes are in operation in Nigeria at present. However a ten year malaria control scheme was inaugurated in 1948 when a special Malaria Service for Nigeria was established, with the Director of the Medical Services in charge. Meanwhile mosquito control schemes have been introduced in some regions. In the period 1942-7, 6 square miles (15.5 km<sup>2</sup>) of tidal swamps breeding huge numbers of mosquitos were reclaimed in the urban district of Lagos through the Lagos Mosquito Control Scheme. A pilot project—the Ilaro Experimental Anopheles Eradication Scheme—for anopheles eradication was instituted in the town of Ilaro in 1950 by the Malaria Service. The Cameroons Development Corporation has organized a mosquito control scheme in the Tiko and Bota areas.

As regards treatment and prophylaxis, while there is no standardized treatment schedule for malaria in Nigeria, quinine mepacrine, and proguanil are in general use, and antimalarial drugs are taken regularly by many educated Africans, as well as by nearly all non African residents.

#### *Malaria survey of South West Africa<sup>4</sup>*

The climate of South West Africa is of the desert type—that is, hot days followed by very cold nights. The cold Benguela current flowing up the west coast plays an important part in determining the climate. This climate undoubtedly has an influence on malaria endemicity and is thought to play some part in several instances of anophelism without malaria encountered.

The presumed vectors are *Anopheles gambiae* over the whole territory plus *A. funestus* on the Okavango and probably the Kunene. Sufficient dissections could not be undertaken to confirm this definitely. The possible role of *A. listeri* as a vector was not settled. The distribution of *gambiae* is shown on a map.

The bionomics and relation to malaria of *A. gambiae*, *A. funestus* and *A. listeri* are dealt with in some detail.

The endemicity of the disease was estimated from spleen and parasite rates of different age groups of indigenous native people. The varying degrees of endemicity are classified according to Wilson's four groups. Malaria of the highest endemicity (Wilson's Group I) occurs along the Okavango River and probably on the Kunene and its immediate environs.

From there south the degree of endemicity gradually decreases and most of the country south of latitude 19° south falls into Wilson's lowest group. This large area is subject to either localized or widespread epidemics. A map is produced to show the approximate areas of endemicity.

*Plasmodium falciparum* accounts for 91% of malaria in the areas surveyed. *P. malariae* and *P. vivax* make up the rest in approximately equal proportions.

Control and eradication of vectors is not dealt with exhaustively, but it is felt that eradication of *A. gambiae* from the greater part of South West Africa does not present insuperable difficulties. Control by means of residual insecticides offers the best hope for the highly endemic regions on the Okavango and in Ovamboland.

### *Species and varieties of malaria vectors in Africa and their bionomics*<sup>6</sup>

The African vectors may be divided into three groups: primary, secondary and tertiary. The first group—*Anopheles gambiae gambiae funestus* (and *funestus* var. *merinensis* (Madagascar only))—are the principal vectors over the greater part of Africa south of the Sahara, including the islands of the region. Largely endophilic, they are vectors wherever they are found. Both vectors may be responsible for intense endemic malaria, while *gambiae* is the most important vector of epidemic malaria. The behaviour of both *funestus* and *gambiae* is not uniform in all localities. While it is without doubt influenced by climatic factors, biological races within the species may also exist.

The second group—*brunneipes* (Leopoldville), *gambiae* var. *melas* (French Guinea, Gold Coast, Ivory Coast, Nigeria, Sierra Leone), *hancocks* (Belgian Congo, Nigeria, Uganda), *hargreavesi* (Southern Nigeria), *moucheti moucheti* (Belgian Congo, Uganda), *nili* (Belgian Congo, Nigeria, Sierra Leone), *pharoensis* (French West Africa) and *rufipes* (French West Africa, ? Sudan)—is of importance in the spread of malaria only in some restricted localities where the primary vectors are absent or rare. Elsewhere they are harmless and mainly exophilic.

The third group, primarily exophilic and suspected of being short-lived, are unimportant as malaria vectors.

Malaria control in the region depends upon control of the primary vectors and of the secondary vectors when the primary vectors are absent or rare.

### *Note on the epidemiology of malaria in French West Africa*<sup>6</sup>

Up to the present, about thirty anopheline species have been found in French West Africa. The author gives a list of them, followed by remarks

Article    Engl. h. w. b.    mm. ry.    Engl. h.    d. French  
Art. i. i. F.    h. with    mm. ry.    =    Fre. h.    d. Engl. h.



concerning the distribution of the most interesting species. The malaria vectors are classified in three categories: principal, secondary and accessory vectors. *A. gambiae*, *A. funestus* and *A. rufipes* are the principal vectors. *A. rufipes* plays a much more important role than was supposed mainly because of its high sporozoite rate. Various factors, such as the diversity of the breeding places of this mosquito, its exophilism, and its flight range contribute to the difficulties of control and eradication. *A. gambiae* and *A. funestus* are two vectors of equal importance. According to the region and locality, sometimes *A. gambiae* predominates throughout the whole year, sometimes *A. funestus*, but there is more often an alternation of the two species according to season, *A. gambiae* predominating during the rainy months when its development is favoured by the rains and *A. funestus* during the dry season.

#### *An experiment in the eradication of malaria in Mauritius<sup>1</sup>*

*Anopheles* mosquitos were imported into Mauritius about 1860, and the first severe malaria epidemic took place in 1867 when the death rate rose to 120 per thousand.

Owing to the antimalarial programme which was reorganized in 1945, the central plateau and the town of Port Louis were relatively free from malaria by 1948. Most of the remainder of the island, however, still presented a high incidence of malaria.

In November 1948 a research team sponsored by the Government of Mauritius in conjunction with the British Colonial Insecticides Committee started to organize an experiment on the elimination of malaria.

The basis of this campaign was the indoor spraying of every building so that all walls and ceilings should be covered with a lethal dose of insecticide. A preliminary survey had been made and records were kept of every building treated.

A careful check on the mosquito population was maintained throughout the campaign. Catches were made in 7 767 houses before, and 76 246 houses after spraying. The percentage reduction in numbers of mosquitos per house was 97.1 for *Anopheles gambiae* and 99.9 for *A. funestus* and *Aedes aegypti*. *A. funestus* originally the more formidable malaria vector in Mauritius and *Aedes aegypti* have been virtually eliminated. *A. gambiae* on the other hand has been found breeding throughout the coastal zone in March and April and still enters new unsprayed buildings in large numbers. For this reason it was decided to initiate a further experiment on eradication of *A. gambiae* by larvicidal methods in the district of Flacq. All sluggish and stagnant water would be treated during the dry season with a DDT solution in high spread material three times at fortnightly intervals and spot oiling used subsequently during routine checks for water surfaces remaining positive.

<sup>1</sup> Article in English with summary in English and French.

Malaria serologic data were collected during three surveys of representative children up to 15 years (a) when the team arrived in 1948 (b) after the initial spraying campaign in 1949 (c) in 1950. The results obtained in the third survey compared with the first show reduction in spleen rate (from 34.8 to 2.8) in parasite rate (from 9.5 to 0.36) in spleen size in parasite intensity and in proportion of *Plasmodium falciparum*. The average parasite rate among children born after the first spraying in their locality was 0.27.

Malaria morbidity figures also show an encouraging diminution. The number of cases notified by hospitals and dispensaries during the seasonal months of January-June 1950 show a reduction of 86.0% over the previous record year of 1948. Many of the notified cases were probably not malaria since of 1,760 examined bloodslides only 3.0% showed malaria parasites. Total death rates and infant mortality rates have also fallen considerably since 1934-48 and malaria death rates per 10,000 population for the epidemic first six months of the year have declined from a mean rate of  $32.2 \pm 8.07$  for 1934-48 to rates of 12.9 in 1949 and 4.9 in 1950.

#### *DDT and BHC in adult mosquito control\**

In an investigation into the use of DDT and BHC against adult mosquitos at Taveta, Kenya, four experimental huts were constructed and treated with Gammexane (BHC) or with DDT in various forms.

In the first month after spraying, most of the mosquitos in the BHC treated hut were found dead on the floor each morning; the rest died within a few hours of capture. An appreciable 24-hour mortality among the mosquitos continued in later months, and even after six months mosquitos applied to wall surfaces for one hour under Petri dishes nearly all died within 24 hours.

In the DDT treated huts, most of the mosquitos collected each morning were in the window traps, 80% or more dying within 24 hours. DDT wettable powder (Ditrene) proved to be a less efficient killer than DDT oil bound suspension.

Laboratory experiments showed that neither of the insecticides exercised a repellent effect, but that the contact time before irritation and flying were induced was shorter in the case of DDT than in the case of BHC, and this time was not sufficient for DDT to produce a significant kill among female *A. gambiae*.

## INFLUENZA IN 1950-1

The influenza epidemic which broke out throughout the world, particularly in Europe during the winter of 1950-1 was much less severe than that of 1948-9. This is the clear conclusion which follows from the morbidity and mortality statistics which have just been published, analysed, and commented upon by Dr M. J. Freyhe, Chief of the Epidemiological Information Section, WHO and Dr C. Klimt of the Co-ordination of Research Section, WHO in the *Epidemiological and Vital Statistics Report*<sup>1</sup>. This conclusion confirms the preliminary information received by WHO during the epidemic and summarized in a previous issue of the *Chronicle*<sup>2</sup>. The trend of the epidemic in various countries as shown by the morbidity curves for the period October 1950 to April 1951, is indicated in fig. 3.

### Europe

Although mild in most countries throughout the world, the 1950-1 influenza epidemic nevertheless took a rather serious form in the United Kingdom which had been relatively little afflicted by the 1948-9 outbreak. In 126 large towns of England and Wales, the number of deaths per period of four weeks from 5 November 1950 to 24 March 1951 was successively 88, 223, 3,682, 2,946 and 465 (see fig. 4). During the second week of January, the number of deaths from influenza at Liverpool amounted to 216, as compared with a weekly maximum of 230 in 1918. The general mortality rate (calculated per thousand inhabitants and per year) in these 126 towns during the week from 6 to 13 January was 25.6 (London 20.5, Liverpool 61.7). Fatal cases occurred especially among persons more than 55 years of age.

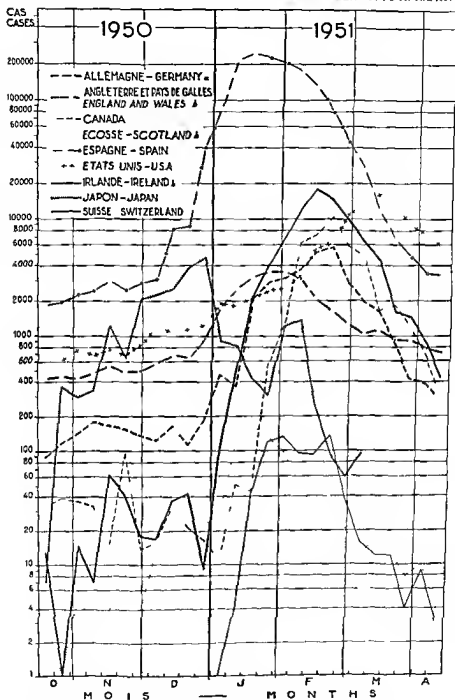
In Denmark 90% absences were registered in numerous schools and factories at the peak of the epidemic. In France some schools were closed. From an initial focus in San Sebastián the epidemic spread throughout Spain where the number of cases reported reached nearly 250,000 during the third week of January. In Switzerland notifications rose from 108 during the first week of January to 18,100 during the week from 11 to 17 February. In Italy, the main spread of the epidemic occurred in February during which month 10,300 cases were notified.

### Africa

In the Union of South Africa there was an epidemic lasting from the second week in May until September with two successive outbreaks, one due to virus B and the other to virus A. In Madagascar incidence was highest in June and July, with nearly 12,000 notifications in each of these

<sup>1</sup> *Epidemiol. vital. Statist. Rep.* 1951, 4, 141.  
<sup>2</sup> *Chron. World Health Org.* 1951, 5, 51.

FIG 3 INFLUENZA CASES REPORTED WEEKLY FROM OCTOBER 1950 TO APRIL 1951



Germany including the Länder Baden, Bremen and Hamburg

England and Wales cases of influenza or primary pneumonia Scotland and Ireland cases of influenza pneumonia

United States of America excluding Texas

months. The morbidity recorded was higher than during any of preceding years.

In Egypt the number of notifications from the end of December that in the corresponding weeks of each of the three preceding years. In Algeria the epidemic although very wide-spread, remained mild in 1950.

#### *America*

In Brazil the epidemic caused 79 deaths in Rio de Janeiro during the last week of December and the first week of January. During this period the number of deaths from pneumonia reached 176.

In Peru there was no definite epidemic. In Bolivia, only sporadic cases were noted. The position remained normal in the following countries and territories: Argentina, Cuba, Curaçao, French Guiana, Haiti, Honduras, Nicaragua, Panama, Puerto Rico, Surinam (Dutch Guiana), Trinidad and Tobago, Uruguay and Venezuela.

The first isolation of influenza virus during the winter 1950-1 in the United States of America was reported from Pittsburgh, at the end of December. The disease was prevalent throughout the country in a mild form at the end of March it had lost its epidemic nature. Virus A was isolated from 79 samples and a C type virus (Francis) was isolated on one occasion in Michigan.

In certain parts of Greenland nine tenths of the population were affected by the middle of January.

#### *Asia*

In India, there was a slight epidemic of a mild nature in Madras in May and June 1950. A more serious outbreak was noted from July to September at the southern frontier of the State of Mysore: more than 4 500 patients were hospitalized in two cities during this period as against 1 000 in June and 900 in October.

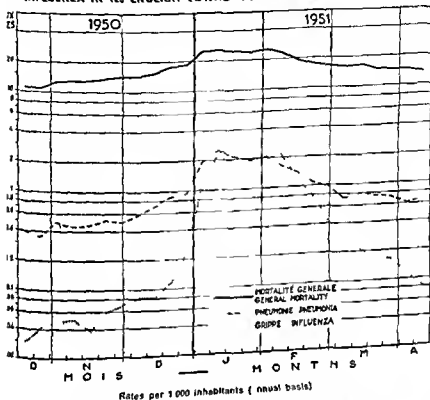
In Japan where the disease had already been prevalent during the winter of 1949-50 the epidemic commenced in mid October—i.e., nearly six weeks earlier than the preceding one—in the south of the country. By the middle of December it had reached the island of Hokkaido in the north where during the last week of the month the number of cases exceeded that for the rest of the country. In all nearly 21 000 cases were reported in 1950-1 as against 17 000 during the preceding winter.

In Iran mild respiratory complaints of an influenzal type were reported by the beginning of January the epidemic was considered as at an end.

#### *Oceania*

The first cases were observed in the Cook Islands in May 1950. The disease spread rapidly throughout the archipelago and the epidemic finished at the end of January. Adults between the ages of 30 and 40 were

3 4 GENERAL DEATH RATE DEATH RATE FROM PNEUMONIA AND FROM INFLUENZA IN 126 ENGLISH TOWNS OCTOBER 1950 TO APRIL 1951



severely affected by the disease jaundice was observed in almost all fatal cases

In New Caledonia a mild epidemic affected almost all the inhabitants in certain regions above all during August and September In the Tonga Islands no cases were notified in October but the number of notifications rose to 6 203 in December falling to 14 in January In Samoa the epidemic although short lived caused some schools to be closed young adults were the most seriously affected In Tahiti influenza caused some deaths it also appeared in the New Hebrides and in the Gilbert and Ellice Islands

\* \* \*

The authors of the article conclude with these words

The epidemic also put the WHO system of epidemiological supervision and information to the test We hope that thanks to the co-operation of a large number of voluntary reporters and thanks to the reports regularly received from national health administrations the World Influenza Centre in London the WHO Influenza Centres set up in some 40 countries and the Organization's regional offices the information

transmitted by radio by cable or by means of the Weekly Epidemiol proved to be of some usefulness

Influenza in 1950-51 fortunately remained mild. It nevertheless provided a test which enabled us to remove certain defects in the above system and to improve it so as to deal with possible outbreaks of character."

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## Notes and News

### Health Survey in Iraq

A survey of health conditions in rural Iraq has been undertaken by request of the Government of Iraq under provisions for technical economic development of that country. Dr W. E. Holmes has accepted an assignment with WHO in order to conduct this survey which is being preparation for the establishment of a rural health demonstration centre.

Dr Holmes has had considerable experience in rural health in the tropics and in tropical medicine and public health at the University of Durham and in tropical medicine and hygiene at the University of Liverpool. He has spent many years in public health service in Malaya.

### Serology Conference in India

A conference of serologists from South East Asia was held under WHO auspices from 21 to 24 November 1951 at New Delhi, India. Following reports on the serology in various countries in the Region, lectures on technical aspects of serology were given by Dr P. Kraus of the Venereal Disease Section at WHO Headquarters, and Dr H. V. S. WHO serologist in Indonesia. Dr J. Knitting who worked with the WHO venereal disease-control team in India for more than two years, discussed mass serological testing in syphilis-control programmes and demonstrated blood sampling and screening procedures. Two working groups were formed to study personnel and equipment problems, another to deal with test reagents and methods. The conference was organized by the WHO Regional Office for South East Asia and Thailand to attend and participation of others from the Western Pacific Region is invited.

### Nutrition Specialist Sent to Ceylon

A hospital dietitian from the United Kingdom, Miss Barbara Taylor, has been sent to Ceylon on a one year assignment under the WHO technical assistance programme. She will study the diet problems in hospitals and similar institutions, advise and assist the Government of Ceylon in organizing scientific diet services and plan and direct training courses in dietetics for hospital stewardesses and other personnel. Miss Taylor is well equipped for her task, in addition to being a trained nurse as well as a dietitian she has had four and a half years' experience as hospital dietitian in New Delhi, India, and is therefore familiar with cooking and diet practices in the Far East.

## Tuberculosis

**Tuberculosis centre opened in Noida**

**Tuberculosis centre opened in Thailand**  
An international centre for teaching and demonstrating all aspects of tuberculosis has been opened in Bangkok, Thailand with the assistance of UNICEF and WHO. Its centre equipped with modern laboratory, x-ray and vaccination facilities is one of several antituberculosis centres established or about to be established under UNICEF and WHO auspices in various parts of the world - in Burma, Egypt, El Salvador, India, Iran, Paraguay and Turkey. The centre from Geneva, Switzerland has recently joined the staff of the centre.

Dr M Mistral tuberculosis specialist from Geneva Switzerland has recently joined the international team already at work at the centre. Other members of the staff include Dr C Vigil y Tardon (Chile) x-ray technician, Dr L W Williams (United Kingdom) epidemiologist and Miss C Eriksen (Canada) public health nurse.

FIG 3 TUBERCULOSIS CENTRE



Home is the place of the heart. It is the place where we find comfort and security. It is the place where we can be ourselves and where we can be loved. It is the place where we can find peace and happiness. It is the place where we can find our true selves. It is the place where we can find our true home.

Appointments at Office for the Americas  
King (Ecuador) has been

Dr J A Higgins (Ecuador) has been appointed Acting Regional Tuberculosis Adviser for the WHO Regional Office for the Americas replacing Dr I M Lourie who is on leave of absence to pursue studies in public health before joining WHO. Dr Higgins was Chief of the National Tuberculosis Service of Ecuador and past President of the American Union of Tuberculosis Societies.

D. A. B. Osvik (Norway) also entered the Tuberculosis Section of the Office for the Latin American Union of Tuberculosis Societies. Dr Osvik was formerly Chief of Mission for the Americas. As BCG Project Adviser he will be sent from country to country to aid in the development of BCG programmes. In conjunction with Dr Higgins he was responsible for the Joint Enterprise in Ecuador where



for the development of a plan for testing almost 1 000 000 persons in a period of one year and vaccinating the non reactors among them

### *Tuberculosis centre in India*

It has been reported that the number of persons attending the antituberculosis centre at Trivandrum India<sup>2</sup> is increasing from week to week. In June 120 persons attended daily. In July 190 of which over 60 were new patients. An average of eight new cases are being diagnosed daily.

Home-visiting is an integral part of the work at all the UNICEF/WHO tuberculosis centres. It is being developed in India despite certain difficulties. It has been found that some degree of isolation of patients has proved feasible in 95% of the homes visited.

## Training Courses in Health Statistics

### *Ceylon*

A 12 week course in vital and health statistics opened 19 September at Nuwara Eliya Ceylon under the joint sponsorship of the Government of Ceylon, the United Nations Statistical Office and WHO. Lectures and field and laboratory projects are being followed by about 40 trainees from Afghanistan, Ceylon, India, Indonesia, Nepal, Pakistan, the Philippines, and Thailand.

The course is being directed by Mr K. Williams, Director General of Censuses and Statistics, Ceylon. Mr A. J. Joseph, Assistant Permanent Secretary of the Ceylon Ministry of Health is serving as Secretary. Among the lecturers are Dr W. T. Fales, WHO consultant in health statistics and research associate at Johns Hopkins School of Hygiene and Public Health (USA), Dr S. Swaroop, Chief of the Statistical Studies Section of WHO (Geneva), Dr Erba Bineyang, Health Statistics Officer of the WHO Regional Office for South East Asia (New Delhi) and Mr C. K. Dilwali and Miss N. P. Powell, both of the United Nations Statistical Office (New York).

### *Egypt*

Forty statisticians from 17 Eastern Mediterranean countries are attending a training course in vital and health statistics at Cairo, Egypt. The course which began 5 October and which will continue to 8 December is being sponsored jointly by the Egyptian Government and certain agencies and offices of the United Nations—the Technical Assistance Administration, the United Nations Statistical Office and WHO. It has been organized at the request of governments in the Eastern Mediterranean Region which participated at a regional conference on health statistics in September 1960.<sup>4</sup>

Mansour Mashaly Bey, Director-General of Statistics in Egypt, has been appointed Director of the training course. Mr O. Cabello (Chile) of the United Nations Statistical Office is serving as Assistant Director in charge of co-ordination of administrative and technical matters. Emphasis in the course is on practical aspects of vital and public-health statistics, with laboratory and field work playing an important part in the training.

<sup>2</sup> *Ch. o. World Hlth. Org.* 1951 5 62.  
<sup>4</sup> *Chron. World Hlth. Org.* 1960 4 34.

